The Sea People/

/SAILORMAN

Double Issue!

No. 5 **December 1985**

Gini Column

Welcome aboard the bumper/double Autumn issue of the Sea People/Sailorman Magazine. The Chairman, Robin Fautley, has already waved an admonishing finger saying: "I told you, James could not produce 3 separate copies of the magazine a year". But what an incredible year 1985 has turned out to be.

We had Henk De Velde turning up here at the base after a marvellous 7 year round-the-world voyage, a meeting that gave me a perpetual lump in the throat. First the boat, a 1967 designed ORO, with no modifications and Henk describing how the design features of 1967 had given him happiness, comfort and a feeling of safety in incredible ocean storms. It was a lesson in humility for me to see, through the design, my own less complicated self of 20 years ago and to remember that some of the basics of design are always basic truths.

As Henk has written openly elsewhere of the separation of himself and his wife and baby son, I can also write about it here. Part of the reason for the lump in my throat was the feeling, through Henk, the boat, the pictures on the cabin sides, of how he missed Gini and Stephan. There is an underlying theme to voyaging on Wharram catamarans of superb man/woman relationships and to see one that comes to grief is, with no disrespect to human beings, as sad as seeing a beautiful ship pile up on unknown coral reefs.

To change the mood somewhat, 1985 was the year that my Belgian agent, Marcel Vleugels on his monohull (yes, he is building a CAPTAIN COOK), on his way for a years' trip in the Mediterranean, within 24 hours of being in Falmouth, succeeded in getting flung into jail for allowing his quarantined dog on deck.

Invited on board for dinner, I was told by the children "Daddy has just been taken away by the police!", and calmly told by Danny (Marcel's wife), to sit down and eat the meal before it got spoilt. After the excellent meal, and several bottles of wine and polite conversation having dried up, (Danny is a remarkable woman, she needs to be, Marcel is an ex-Belgium Star fighter pilot), I began to use the radio telephone to the police station. Fortunately, I am known in this area and after personally placing a security bond, I was able to get Marcel out of jail until his court hearing came up after the weekend.

Now then, to all our foreign builders and friends: Britain is a Rabies free country, and they have very strict anti-rabies regulations on the importation of all mammals – dogs, cats, rabbits, hamsters, mice, rats – *on ALL mammals*. The Agricultural Department working through the Customs Department are demanding that such animals are kept in *a confined and sealed place down below.*

Marcel understood this and was very careful in that the dog had had anti-rabies injections and when alongside a pier was confined down below. But when sailing in the wide Falmouth estuary and anchored offshore at the head of Restronguet Creek he saw no logical reason for it not to be on deck for "doggie" purposes, as it could not get ashore anyway. Indeed, it was technically restrained by the life-line.

Someone saw the dog on deck, noticed the foreign flag and complained. Coupled with a strong desire from the Agricultural Department to make Marcel an example, the arrest was the result. The 'example' can be a £1,000 fine and the destroying of the animal.

I got a good solicitor who argued the wording of the Act in court. Marcel got off with a £100 fine and the return of the dog. The Agricultural people were livid and Marcel Vleugels headed for sea with his two woman crew, children and beautiful cocker spaniel.

Back to Ocean Voyaging. As well as Henk De Veldes' ORO round-the-world trip this year, John Margarson completed a similar voyage on his NARAI MKIV, details of this are to be had in this issue. Glen Tieman on his 26ft TIKIROA Coastal Trekker headed off from Mexico to Hawaii, details also in this bumper issue.

Some people were worried that the Sea People/Sailorman with James (that's me, folks) as an editor, would result in censoring uncomplimentary remarks about a design. Glen Tieman suggested in his article that the designer of the TIKIROA hatches should have a bucket of cold sea water slung over him! That would be twice as ungallent for the original hatch was designed by Hanneke who has since changed the design *and* 1985 was the year of Hanneke's baby.

When Hanneke wants something, she gets it, and when she does something it is usually worked out down to the finest detail. She not only wanted a baby around a certain date i.e. around Midsummer, but as a sea/dolphin woman wanted the baby born underwater. So the first job of the builder of the mould of my fibreglass TIKI 26 was to produce a 4ft 'Beam' x 3ft draft fibreglass tub for the birth of the baby. Everything went to plan and after Hanneke's five hour immersion, James Henry Boon Wharram was born under-water on July 1st 1985 at 00.30.39 hrs.

The homeopathic doctor said it was the most relaxed birth he had ever seen, it being the first waterbirth in Cornwall and surrounding areas. After viewing the underwater birth video, there are at least 10 other women in this area planning to have babies the same way.

After 4½ months 'Jamie', according to the doctor, is above average in weight, co-ordination and general alertness (a general claim for underwater birth babies). He is unafraid in the swimming pool and with due warning can be ducked under water without him breathing it in or getting unhappy.

It reads like a success story BUT Hanneke miscalculated. Hanneke not only makes mistakes on the water tightness of a hatch (see Glen Tieman's article), but she also did not realise that this child is James Henry *BOON WHARRAM*, and is not going to sit quietly in his play chair while Hanneke does drawing, he wants attention, which he rewards with beautiful smiles but he has no conscience whatso-ever about slowing up drawing/designing/magazine activities.

Well at least in coming months and years we will be able to write about *young* family sailing . . . . .

This youth kick has perhaps softened my brain; my advice to builders on selecting a boatdesign is to be sensible, and in line with this advice I was planning for our own use a new 30-40 ft. design, either a TIKI 31 or a developed 39 ft PAHI, with TIKIROA construction. I've gone mad . . . . and decided to build a 63 ft PAHI! Beginning 1986, to be used as a Charter ship (featured in this issue).

1985 was the year a former HINA owner and our (PCA) secretary bought John Shores' TEHINI 'Yin-Yang' and was last seen sailing happily away with a 2-girl crew and 4 cats. Congratulations Mike!

After many years of requests for having ready-built Wharram boats available, 1985 was also the year that we took the plunge and began building a commercial fibre-glass TIKI 26. The man in charge of this project is a Cornish fibre-glass expert, Lindsay Keith.

This boat should have been exhibited at the January '86 London Boat Show, but when we received our stand allocation, a few days before our TIKI 21 Gibraltar trip, it had a concrete roof-supporting pillar through the centre where the TIKI 26 should have gone! Red faces from the London Boat Show officials, gnashing of teeth from JWD. So we will not be at the London Boat Show.

Nor will we be at the beautiful premises of the 'Cruising Club' at St. Catherine's Dock for our next AGM, as last year. We had left the 'Cruising Club' clean, neat and tidy, but others, apparently, had not, so all outside clubs have been banned from renting these magnificent premises. This left the chairman of the PCA frantically trying at the last minute to obtain a suitable place for the AGM. It will now be held in the West Brompton Lounge at Earls Court on Sunday, the 12th of January, between 13.30 and 19.00.

The Sea People/SAILORMAN

The Magazine of the Polynesian Catamaran Association

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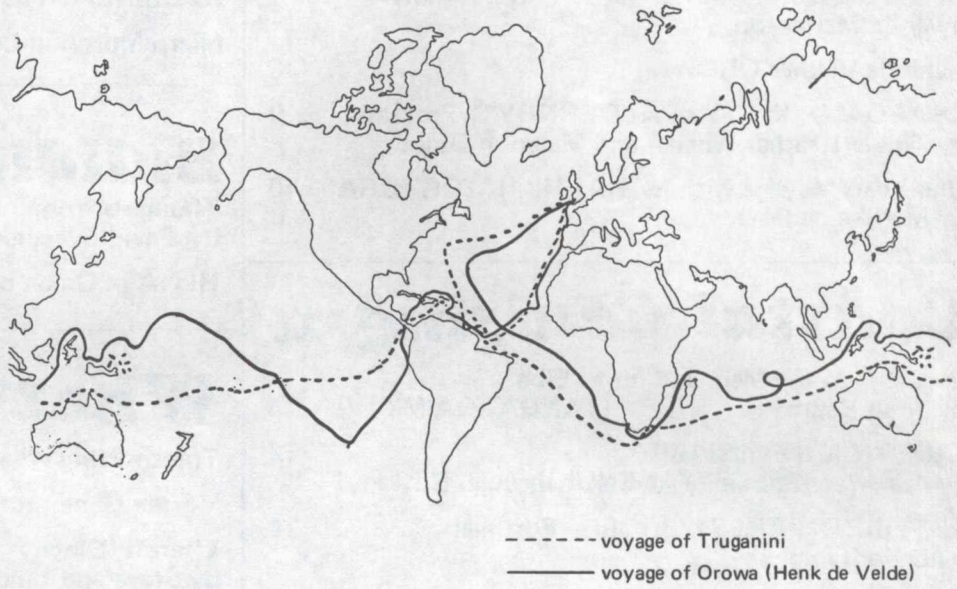
Cover Photograph:
Henk de Velde's round-the-world ORO 'OROWA'.

Ocean Cruising

VESSEL & GEAR TEST, NARAI Mk IV 'TRUGANINI'

by John Margarson

The first Ocean Voyaging article in this Sea People issue is a highly interesting and contentious one by the round-the-world sailor John Margarson. It is reprinted in full as he sent it. As the editor I regret that because I was emotionally involved with Henk De Velde at the end of his round-the-world voyage in Falmouth, I neglected to at least formally interview him with a tape recorder for article inclusion in this issue. At the time it seemed wrong to pressure a man who had just sailed solo for 31 days across the Atlantic, at the completion of a sailing epic. Many of his conclusions disagree with John Margarson, here is the Margarson report complete.



In October 1979 I left Holyhead for the trip to the Canaries. Only a few hours after leaving the radio gave a gale warning. We were lucky to make Ireland before it hit. When in Ireland, we made contact with James Wharram who came aboard our NARAI Mk IV 'Truganini' and said it was the most standard, non-altered NARAI Mk IV he had seen. Since then a lot of water has flowed under the keels and she has visited the Canaries, Barbados, Tobago, Grenada, Grenadines, St. Vincent, St. Lucia, Martinique, Dominica, Guadeloupe, Antigua, Panama, Galapagos, Marquesas, Tuamotu, Tahiti, Cooks, Pago Pago, Western Samoa, Tonga, Fiji, Great Barrier Reef, Darwin, Cocos, Christmas, Rodrigues, Mauritius, Reunion, S. Africa, St. Helena, Brazil, Cayenne, St. Barts, St. Martin, B.V.I., U.S.V.I. and Bermuda.

After so much voyaging people have asked my opinion about the boat and what I'd change if I was starting again, so I thought I would put my thoughts on paper.

The boat

The boat is built strictly to the plans, using Marine Ply BS1088, top grade red deal, resorcinol glue and phosphor bronze grip-fast nails; she is cascover sheathed and has aluminium masts and stainless steel rigging.

The voyage

Well, what has she been through and how did she fare?

She was a little too eager to join her natural element, water, jumped the chocks and landed herself down the river bank, cutting a converted lifeboat in two – not a scratch on 'Truganini'.

Next week she was caught on a lee shore, anchored on sand as hard as concrete, the tide came in and it started to blow a force 10, the boat was lifted and dragged onto the sand hundreds of times, each time nearly breaking my back; I felt sure she would break up – no damage to 'Truganini'.

In Australia I ran straight up on some unchartered rocks at 6 knots, she rode right up the rocks and came to an abrupt stop, the bows pointing towards heaven. I felt sure she must have been holed and sent the crew down to see if she was taking water, before pushing her off the rocks – not a scratch on 'Truganini', cascover must be tough stuff.

In Durban a 60 knot gust came from nowhere, causing havoc in the anchorage, I was pushed onto a solid ferrocement boat and our gunwhales had an unlawful liaison. 'Truganini' chipped and cracked the concrete, and had a few small gouges and paint removed on her own gunwhale!

Heavy weather

She has had a few moderate gales on the nose which never caused a problem and into which I continued to beat. The strongest breeze she has had over the stern would be 40-45 knots for 3 days after leaving Capetown. I was by myself and didn't really notice how strong the wind was and had staysail, full main and full mizzen up, romping along. After a day and a half I got sick of all the bumps and banks, so reduced sail. A 38 foot trimaran in the same area had a drogue out and the captain got thrown out of bed three times, 'Truganini' just kept riding those rails that somebody seems to put in the ocean for her to follow.

Gear Failure

Before leaving S. Africa I was proud of never having had a gear failure, then, when leaving Capetown, I broke a urdder. I left with a following gale and got 7 miles out and the wind died, there was a big swell coming from the Southern Ocean and short gale waves coming at right angles from the land. 'Truganini' was getting tossed in all directions and not a breath of wind to steady her. I hadn't tied the tillers and I think she probably dropped backwards off many waves, the two bottom pintles either jumped out or disintegrated and the starboard rudder broke. I had a tow back to Capetown and made repairs. The water in S. Africa was cold and dirty, so that I hadn't been able to check that the pintles were wired correctly.

Polynesian Ancestry?

When I arrived in Polynesia I saw a lot of small boats, Polynesian multihulls, and read a lot about them in the libraries. If you plan on taking your Polycat there, don't expect any special treatment as they wouldn't connect your boat with those of their ancestors.

Henk De Velde made the opposite observation saying that the Polynesians in the islands he went to immediately connected the boat with their ancestors, saying that they actually commented that his twin-hull ORO was a 'real' boat as opposed to modern monohulls. He had a delightful story of sailing with a group of 50 Polynesian men, women and children on a several day fishing trip in some wide Atoll lagoon.

'Truganini' has been a good boat to me, what changes would I make if starting anew?

Flexible Joining

I'm not sure about the Wharram flexible joining of the hulls, sure it works, 'Truganini' hasn't fallen apart yet, but is it necessary? The old Polynesians couldn't have held their boats together in a rigid manner even if they had wanted to — they didn't have the materials, remember iron was only introduced there with Captain Cook whose matelots gave the local girls nails for their favours; eventually the 'Endeavour' nearly fell apart as the crew withdrew nails from everywhere.

Sterns

The Wharram raked stern is pleasing to the eye and looks very Polynesian but I would give consideration to a vertical stern with triangular transom. This would eliminate problems of rudder linkage, save a lot of material and time (money) and take a lot of weight out of the 'ends' to reduce pitching. The underwater profile would remain the same since the rake on the stern only starts at the waterline. Some say that the canoe stern would be destroyed which could be important in running before a storm, but I think the extra surface area presented to a following sea would be minimal. I have seen a reverse transom on 'Stealing Time', a Polycat, and to my eyes it looks very attractive and he has had no problems.

Actually, the builder of "Stealing Time" was the man who years previously built Henk's ORO. "Stealing Time" is in essence an enlarged ORO with a sloped in transom stern. Henk commented that his ORO on meeting "Stealing Time" had no trouble sailing past and around him.

Slatted Platforms

'Truganini' has slatted decks which can make the cabins a bit wet. I have seen solid decks in the centre section and they seem to work well, I've never had solid water on any of my deck, but if I did have water on a solid deck, it would soon run off. I was skipper of a large trimaran with a large cockpit, we got pooped, the cockpit filled and if we had been pooped again I'm sure we would have sunk in the middle of the Pacific, so I know the dangers of areas that hold water. The theory that slatted decks allow wind to pass through in a capsize situation sounds very nice, but an aeronautical engineer explained to me that strong wind blowing against a slatted deck would cause a lot of turbulence, allowing very little air to pass through the slats and behave as if the deck was solid.

I have seen a sheet of plywood lying on the slatted deck of RONGO and TEHINI actually rise and hover on the current of air passing upwards through the slats under gale conditions. So the air does go through the slats, though I myself have been considering, if there is enough lift on the under-side of the deck to de-stabilise the boat, as was feared in earlier years when less was known about offshore multihull sailing. This is why some of the newer PAHI designs have at least in the centre section, a plywood deck.

Beamtroughs

I think the beam troughs are a waste of time and would do away with them, mounting the beams on deck. I estimated that having beam troughs adds more than 100 hours to the building time and is the most difficult part of construction, they add weight, use material, take up a lot of interior space and can be a good source of leaks. Mounting the beams on deck would give a much drier boat as the deck could be raised and, when surfing, the bottom of the beams in their present position tend to hit the top of the waves.

On the Classic TANGAROA MK I and II designs the crossbeams are mounted on the deck, on the MK IV designs the decks have been raised to the level of the gunnel to give increased headroom down below. If you mounted the beams on the deck on the Classic MK IV in the same way as the Classic MK I and II with the extra freeboard they would look as ugly as a dog's dinner.

The plans also specify hefty pieces of timber to be placed parallel to the outer mast beams in the troughs but one eighth of an inch away from the beams. These pieces of timber do nothing except add weight and costs. If they did restrain the beams, then there would be something drastically wrong with the mountings as they hold the beams very steady in a fore and aft direction. The TANGAROA Mk IV 'A Touch of Magic' does not have these timbers as the builder could see no reason for them and I agree.

These beams are to keep the hulls square to each other and to prevent the beam brackets cutting into, nicking, wearing or creating a sheer force on the vertical beam bolts which are designed to work NOT in sheer but in tension.

Bulwarks

He also got fed up with his bulwarks getting knocked off by the seas so he took them off and threw them on the garbage heap in Tortola, and the boat looks none the worse. I have had mine knocked off by waves many times. Originally they were lightly fastened as recommended, but now I epoxy them back. Unless you plan to use the boat as a tug and try and hit everything you can, the bulwarks add nothing to the boat except 3 sheets of ply which is 150 lbs of useless weight, £60-plus wasted money and 2 days wasted time fitting them. Unfortunately the hulls without the bulwarks do not have a pleasant sheer, which could be corrected by making the bow a little higher. If the bulwarks are done away with, I think it is important to paint a 1 foot wide stripe in contrasting colour where the bulwark should be, otherwise the topsides look very high and cumbersome.

Yes, on the MK IV Classic designs, in theory the bulwarks could be done away with but it would spoil the sheer line on the deck. It would give too high a top-side appearance to the hull and they do have some value, in that they do take a considerable amount of dockside wear and tear. They protect the vital deck to hull joint and are easily changeable during an indepth refit, that makes the boat look like new.

John Margarson is the first person to report regularly losing his bulwarks by waves. Have any other MK IV owners had similar experiences?

Crossbeams

I replaced the very front beam with an aluminium tube which looks much better, is lighter and much stronger. I looked around for 2 years for a bit of broken mast and in the end bought new; and since that day I have found dozens of suitable pieces of scrap! With the price of timber as it is, consideration should be given to using aluminium extrusion for the main beams, great importance would have to be given to selecting the correct strength. The extrusions come in 6 metre lengths, which is the exact length required, so there would be no waste and at least 400 lbs could be saved and maintenance in that area eliminated.

Over the years consideration has been made many times in the design office to use aluminium cross beams. It would certainly make design easier for the designers, leaving the responsibility for the extruded section to the suppliers – Proctors, Bowmans etc. etc. The problem for the far flung empires of Wharram builders, in obtaining aluminium extrusions, is that sections vary round the world and can be expensive to buy.

Aluminium crossbeams and crossarms were used in the mid-70's by other designers, who began to follow the 'no deck cabin' lead of James Wharram Designs. It is interesting to note that the latest 40 ft racing multi-hulls, taking terrific sea punishment, in general avoid aluminium extrusions for crossbeams, using box beams instead.

Galvanised fittings

I think galvanised bolts and galvanised rudder fittings are false economy. I had galvanised roofing bolts to hold my windows in and after one year had over thirty rust streaks down each hull and the same on the cabin tops – it looked terrible. I had a terrible job to remove the old bolts as the heads had corroded. It took a lot of time and I broke a lot of perspex. I urge anyone to use stainless. I still have the big bolts that go through the sides to hold the backing timber for the beam connection and they weep a lot, so I have to clean the stains with oxalic acid.

Commander Bob Evans, former chairman of the PCA, was an aircraft accident investigator. He was also a scrutineer on the first Whitbread Round The World race and on his experience thereof, used to give a devastating lecture on gear failure, chiefly concerning stainless steel items. In the modern world of Yachting, there is increasing concern over the blanket use of a substance called 'stainless steel'. There are many different alloys under the name of stainless steel; they require careful selection for sea use, and they are capable of oxidizing and failing without warning. Correctly galvanised fittings do not weep rust; roofing gutter bolts do. We always grease all bolts before inserting.

Accommodation

Accommodation? The original saloon was very poor, it had a bench seat either side, there was no room for storage, it was like sitting in a slit trench, and water used to shoot in from the hatch. I've been giving thought on how to improve it for years and finally got round to it. I thought of moving the hatch from the side to the back but this would restrict entry to the aft bunk and would be a big structural job to stop the cabin sides falling in. In the end I kept the hatch where it was and built semi-bulkheads from the cabin top down on either side of the companionway, this gives a lot of strength and stops any water shooting into the cabin area. The floor level of the front half of the cabin was raised to give sitting headroom and a good view out of the ports. Seat backs were put in which provided a lot of storage and took out the slit trench look.

The system of raising the floor level in the front half of the cabin to give sitting headroom and a good view out of the ports was, as far as I know, originally used on ARIKIs built in Holland around 1970. Since then many other builders have used a similar system. It is used in the CAPTAIN COOK's galley hull. The photo below shows yet another NARAI MK IV galley hull alternative.

Everywhere was painted white and forward looking windows installed, the result is much lighter; the original timber was beautiful, so I varnished it, which made things very dark. The bunks have always been good, dry, private, and one can't get thrown around in them. The galley is big and easy to work in because of the stable motion.

Sheathing

If I was building again I would probably use exterior ply and saturate with epoxy as Marine Ply is so much more expensive. I would sheath the outside, Cascover has proved to be good, it has excellent abrasion resistance, prevents rot and stops borers; it is expensive and labour intensive to apply. Instead of buying the brand 'Cascover' I would buy my own resorcinol glue, nylon cloth and probably high built epoxy paint. When 'Truganini' was built WEST type construction wasn't popular, since then I have used WEST and it is fantastic stuff, gone are the traditional shipwright skills, epoxy with filler will glue or fill anything! However, I would use resorcinol for tight wood to wood joints as it is a good glue and cheaper than epoxy. I poured gallons of wood preservative into 'Truganini' and it seems to work well.

The PAHIs have been designed to use exterior ply and epoxy, sheathing being done with epoxy and glass cloth as an improvement on the nylon and resorcinol glue (cascover).

Mast Rigging & Sails

The aluminium masts and stainless rigging have proved themselves to be maintenance free. The masts came from Bowman Masts as a kit, the instructions were barely adequate, but there wasn't a lot of work or skill involved in their making, and a great saving. I bought a roll of s.s. wire and a criping tool to make the rigging, which has been good.

When I bought the Bowman mast it came in a 40 foot length so to follow the plans I chopped off a couple of feet, this was a great mistake as I think she would sail a lot better with the extra rig. I would put a 250 sq. ft. yankee on a roller furling system and probably roller furl the staysail and main. I have had a very nasty experienc trying to get the yankee down in a blow and anything to reduce foredeck work is good for comfort and safety.

Has any long distance sailor over a longer than 1–2 year voyage had experience with roller furling systems? The cost is high, the possibility for horrendous failure seems also high. Please, people with experience write in for the benefit of readers.

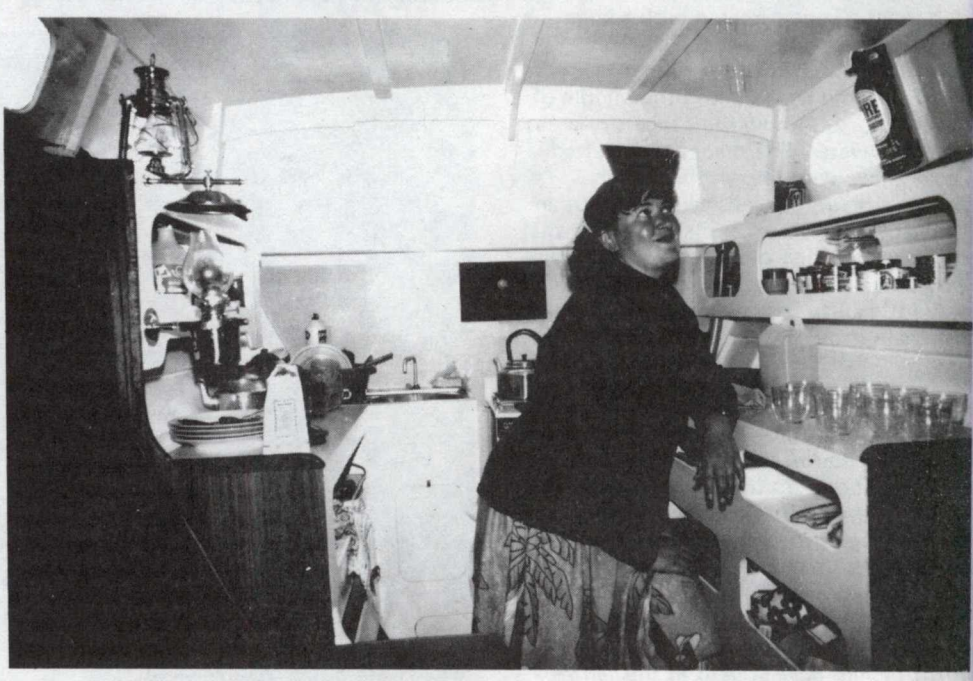
One of the best things I made up was an alu pole to keep the no. 1 out, it was 6 metres long, but sagged in the middle, so I fibreglassed it and now it is shorter but strong.

Sailcovers

I think sail covers and awnings are a must in the tropics. Without cover, sails turn to dust very quickly. Awnings make a lovely area to sit on deck; I know some Wharram cats with rush mats, bean bags, soft lamps, and they are lovely.

Self-Steering

I left with a Q.M.E. self-steering which couldn't laze at all, so I mounted an Aries on beams on the stern. The Aries is wonderful, lazes in any condition, a good reliable friend; the servo rudder is unprotected and has hit some objects, breaking the collar, but a new collar is easily fixed. The trimtabs detailed in copies of 'Sailorman' should work well.



Galley of NARAI Mk IV 'KUMARA' of Will and Wouter Eichelsheim

Electricity

For electricity I started up with a petrol generator, they make a lot of noise, always need petrol, are often difficult to start, heavy to lift around, take up a lot of space and they go rusty. I had a brief love affair with a towing generator which converted to wind but now I use solar panels which are excellent. Always have paraffin lamps as stand-by!

Cooking Stove

Cooking has always been on an Optimus pressure paraffin stove with double rings and oven. The pre-heat system was nothing but trouble, clogging up and burning through the burners, I pre-heat with alcohol now. Clean paraffin is the secret to good operation. Never go anywhere without the tool to remove the nipple and a spare burner with parts. These ready-made stoves are expensive, make your own from your own burners or make a bracket to hold the old style primus stoves.

Compasses

Bosun grid compass, I like a grid compass, I find them easy to use, the Bosum seems reasonable though one of mine is not working now. One of the problems may be that a compass is set up to operate in the northern or southern hemisphere and I took mine down to the South where they tend to jam. *(This is correct. It is mentioned and explained in Andre Viljoen's article page 16 – Ed.)*

I used to have a monocular with built-in compass which was wonderful for taking bearings, especially bearings of ships to determine collision courses. The compass eventually gave up and the monocular grew fungus inside.

Log

Walker trailing logs are very reliable and accurate, the line to the spinner chafes and has to be checked and fish sometimes take the spinners, but they are still good logs.

Sextant

Plastic sextants (Ebco) work well though the index error moves 6 minutes whenever it wants to, I use air navigation tables to calculate position line with. I used 'Truganini' in Australia as a day charter boat and also did super low cost week charters and made quite a bit of money so I treated 'Trugs' to a Walker 4.12 Sat Nav. They are very accurate machines, either they work or they don't, the Walker's have a reputation for not working! After I bought it I never seemed to have electricity so never used it! It broke down in S. Africa and I took it to the agents who were eager to accept it as a warranty claim, then presented me with a bill for $600, at the time I didn't have £60! However, Walkers honoured the warranty. If used properly Sat Navs are a good aid but I think they are going to get people into all sorts of problems. I know of many people who cannot take a sight and rely on their Sat Nav. Recently I have heard of many people who can't navigate and don't have a Sat Nav. I found using the Sat Nav took all the pleasure of a landfall away, there is no longer any worrying left to do, as you know where you are.

Radio Equipment

For an RDF I have a Lokata which has had a few problems and I think is overpriced. The handheld Seafix with digital readout seems to be good. A short wave receiver is important for time signals and the World Service, the Sony 2001 is particularly good as it picks up 'Ham' networks which give weather. A compass/aerial can also be bought that fits the radio to use for RDF.

Seavoice V.H.F. was good until a booby bird knocked the aerial off the masthead.

Callbuoy E.P.I.R.B., a friend of mine has just been rescued because of his E.P.I.R.B. I used my Callbuoy off Liverpool and nobody heard it, I sent it back to the manufacturer and they said it was working. I'm not sure how good the Callbuoy is.

Anchor

The anchor, a 45 lb. C.Q.R. with 36 foot of 3/8" chain and 18 mm nylon octoplait, holds well. I have found a fisherman anchor to be useless, it is supposed to be good for rock but even then I don't think it would beat a C.Q.R.

Motor

I think a good reliable outboard is probably the best auxiliary power. They are expensive on fuel, range is limited and they are not practical in a heavy sea, but the alternatives add a lot of weight to the boat. I had a Johnson 15 hp longshaft for 5 years and was glad when it broke in Brazil, and I swapped it for a ton of beer. In the West Indies I bought a 15 hp Yamaha and I'm expecting a lot more from that than the Johnson. Look at the Johnson. Look at the Johnson's engineering, nothing accessible, puny pullcord and recoil start, I had a lot of electrical and reed valve trouble. Mount the outboard on a long strut bracket hinged to a beam at the front and lift with a rope and pulley. Peter Spronk designs always use this, and it works well.

CONCLUSIONS

Performance

What about performance? I have had 10 days in a row with 185 mile days and two days of over 200 miles. My fastest port to port passage was 536 miles in 68 hours (7.88 knots). All of these passages have been reaches in 15-20 knots, they are not comfortable, there is a lot of banging and bumping. The NARAI is not fast in light airs, if I had light weather sails I think things would improve. She tacks through 100° on the compass and makes 10° leeway. On the wind 4 knots is normal but I once did 7.5 knots when I was caught with all sails up on the wind, she went beserk and jumped from wavecrest to wavecrest, it was very dry and not much noise, but I was terrified; in the end the staysail and yankee blew out. With good wind and waves she will surf at 12½ knots quite often, once with too much sail I held a surf for about ½ mile at 15 knots. I have surfed at over 20 knots with no wind on a bar with very steep waves, it was just like being on a surfboard, she didn't broach and steered straight as an arrow. Another crazy boat thought she would follow, she broached and was rolled like a toy, the crew were thrown into the boiling pot and were lucky to live, their boat became matchwood. The NARAI on long passages is easy to sail and I have sailed 12,000 miles solo including around Cape of Good Hope, however, they are not good for close tacking.

Cost

If you use good materials it is not a cheap boat to build. The hulls take a lot of material to build and the rig, sails, ground tackle, nav equipment, galley gear etc. etc. cost the same whatever hull you put them on. I've just had a quote for building a NARAI with no electronics for $75,000, a 42 foot Peter Spronk design would cost $150,000. You can build any vessel using cheap materials and you end up with a cheap boat. I've talked to brokers in the Carribean and they say Wharram Catamarans have a stigma attached to them; apparently many people like a deck cabin and even a greater number of people don't like multihulls.

Epilogue

Wharrams do have a good name as a sea boat, the more I sail 'Truganini' the more I am convinced they won't capsize and am convinced they are solid sea boats. Part of this 'stigma' is earned by the poorly built Wharrams that exist, it can be poor workmanship, poor materials or a mixture. I have recently seen a well built TANGAROA that was glued in cold temperature and now the boat is falling apart! There are some lovely Wharrams around but unfortunately they all seem to be tarred with the same brush.

'Truganini' has now completed the task she was built for, a long circumnavigation. She performed well, nothing phased her, she was a good home and friend. Unfortunately that phase of my life is finished and she is now for sale/sail, ready to go to the warm waters she loves so much.

Summing up John Margarson's 'Boat Test' results, we find on the positive side:

1. His NARAI 'TRUGANINI' proved enormously strong,
2. felt very safe
3. was very fast on the reach
4. surfed in perfect safety at 15-20 knots
5. was very easy to sail, even 12,000 miles solo
6. will not capsize
7. has good, dry, private and comfortable bunks
8. has a big, and easy to work in, galley.

The following suggested changes are worth noting:

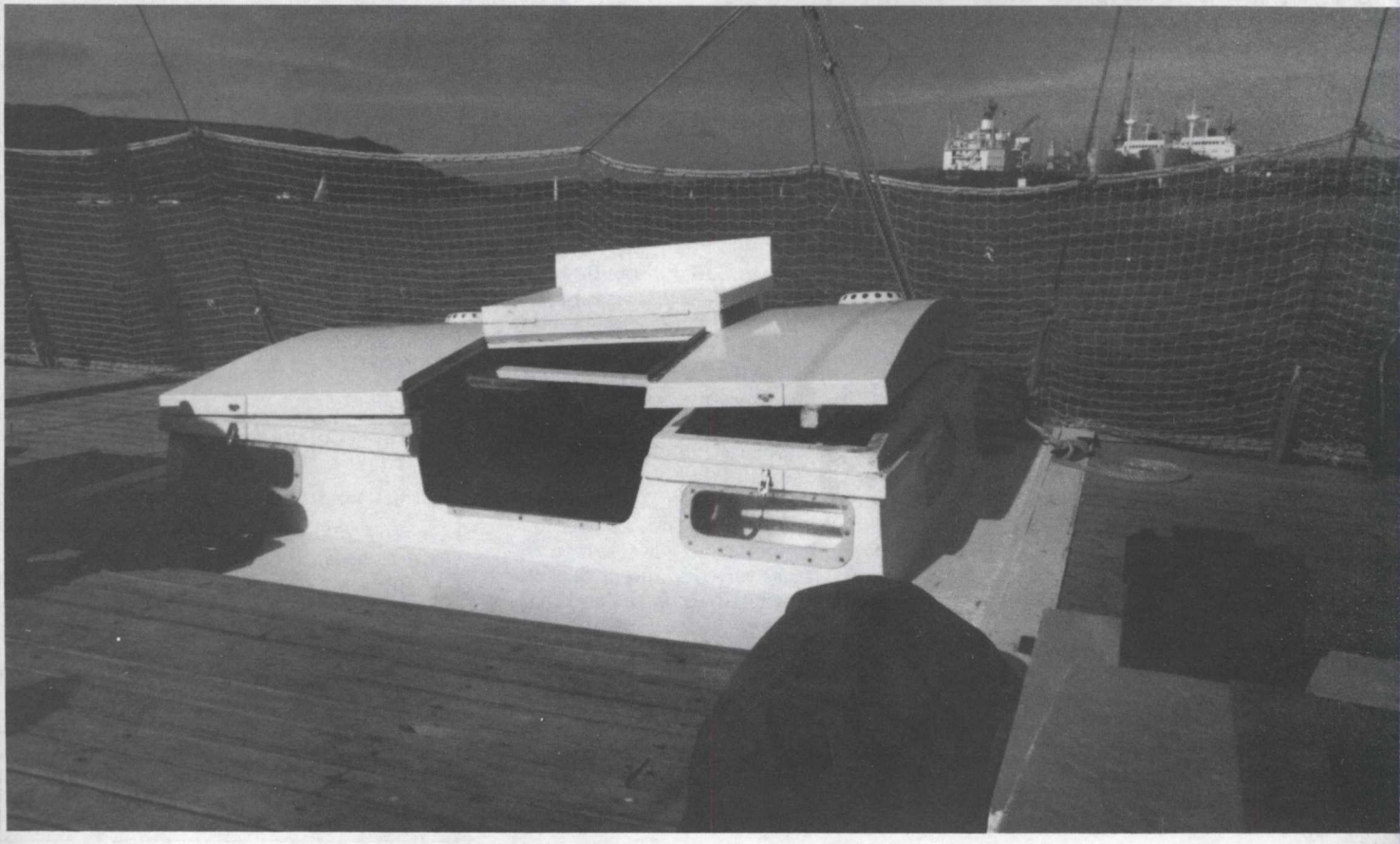
1. the use of stainless steel bolts for the windows
2. Raising the floor level of the front half of the main cabin to give sitting headroom
3. using exterior ply with epoxy (next time!)
4. have a slightly longer mast for extra light weather sails.

Round the World ORO 'OROWA' in Falmouth harbour after a 31 days solo voyage from Bermuda.

Henk de Velde's 'OROWA' is a standard 1967 ORO design with the original lift-off cabintop. Henk described it as his airconditioning unit (below). Apart from after-cyclone repairs (see 'Sea People' Nr. 2 p.4) the boat was as built.

Note the open decks of the 'Classic' design, that some people prefer and others don't, and the 'baby netting' fastened to the shrouds.

Top photo from left to right: Christian Shirp, James Wharram, Henk de Velde, Ruth and Jamie Wharram.



Tim and Heather Whelan hot on the heels of the round-the-world NARAI MK IV 'Truganini", with their NARAI MK IV 'Ika-Roa'. Here are two reports received from them this year. They remark that some of the Polynesian outrigger canoes, in contrast to John Margarson's comment, are "exactly like Wharram hulls".

'IKA ROA'

by Tim & Heather Whelan

GALAPAGOS, 13.5.1985

Got here today after 18 hours of doldrums/headwinds – not fun! Met up with Pat Patterson in Panama, so we heard the news that Hanneke is pregnant – Congratulations – hope all goes well.

After the Grenadines we went to Venezuela which was cheap but the official rip-offs there and in Panama are amazing. Our canal transit was hairy as the outboard was playing up, but we made it. I'll write more fully on this for 'The Sea People/Sailorman' later. We met another Wharram in Colon – a really nice American couple, Cathy and Dennis, who are very interested in dolphins. They didn't know about the PCA/'The Sea People/Sailorman' so we lent our copies. Cathy says 'Two Girls Two Catamarans' and 'The Hobbit' are her favourite books. She promised to write to you.

Three books we recommend for 'Have you Read': Farley Mowat, 'A Whale for the Killing'; Lyall Watson, 'Gifts of Unknown Things'; and a novel 'Shipkiller' (author forgotten).

'Ika Roa' is still in good shape although this windward passage has blasted a lot of paint off the bulwarks. Oh yes – port-side rigging fell off the mizzen halfway here (must be a design fault) – what do you mean 'check it'?? There's too much work in this cruising!!

Tim and Heather Whelan

NUKU HIVA, 11.7.1985

Arrived Hiva Oa one month ago after visiting Galapagos. Have spent 2 weeks at Fatu Hiva (fantastic place), then Tahu Ata, now here – Nuku Hiva for the celebrations (July 4th). Have been measuring up and photographing the va'a (outrigger canoes) – different on each island – *some exactly Wharram hulls!* Found out that 'IKA ROA' means long or big fish in Marquesian – it's supposed to mean the Milky Way – that's probably Maori!

Just heard from some friends that they received a card from Tim and Heather from Tonga a few weeks ago. Who knows where they are now! - Ed.

Sea People/Sailorman No. 4 featured Malcolm Dines' NARAI MK IV on the cover, heading out from Falmouth to the West Indies. Here is his report of his trouble free crossing. Although his final sentence, on this cold November day that the West Indies is *too* warm takes a lot of believing . . . .

'KITTY OF ALDERNEY'

by Malcolm Dines

"Just a few lines to let you know that 'KITTY' is now in English Harbour Antigua, laid up afloat in the hurricane hole for a few months while I take a 'Summer' holiday in Europe and paint the house.

I last wrote to you from Gran Canaria not knowing what my next trip would be. I sailed to Los Cristianos, Tenerife, and there met an English surfer who wanted to get to the States. He hadn't set foot on a yacht before but I thought he had the makings of a crewman, so after a couple of weeks' local sailing to Gomera and back – one of the windiest stretches of water I know – we headed towards the Cape Verde Islands. Half a day out and the breeze dropped, the beginning of a calm that was to last four and a half days. Incredible in that part of the world at any time, and this was March. Extract from log 12th March:

Launched the dinghy this morning to take a photo of 'KITTY' in the Doldrums. Big red, white and blue sail hanging liveless but with terrific reflections in the water in the early morning sun. Visited by dolphins and were able to see them very clearly underwater because of the calm.

Friday 15th March. The wind came about dawn. Moderate favourable 'tradewind'. 'KITTY' has been galloping along all day at 5-6 knots accompanied by a scattering of white horses, bows rising and dipping a little on the swells, two spinnakers (one from each masthead), stays'l and mizzen all pulling steadily. Dry decks, temperature low 70s – no complaints.

Sunday 17th March. Another good day's run, and half an hour ago we had a sudden increase of wind that gave 12 knots on the water speed repeater. Remarkable because we only have the small spinnaker on the mizzen mast and a little stays'l set and also the self-steering arrangement is coping well. (If you remember I have an Aries gear controlled by an Autohelm 1000 instead of the wind vane – still working perfectly).

From my notes on Mindelo Cape Verde Islands: Stark barren mountains all around. Palm trees and Portuguese red-roofed architecture on the waterfront. Gusty wind but safe anchorage. The local inhabitants are mostly black and not very well off but there were supplies of fresh vegetables that we could afford and *water*. The only source of water is a desalination plant and it is sold to the big ships by the ton. We had to buy the minimum – one ton of water – for £3. We filled every receptacle we could find and it's good water. Fourteen small loaves of delicious brown bread delivered hot to the boat on the morning of departure at 15p each. Good hard cabbages too – green tomatoes, green bananas.

Thursday 21st March. 'KITTY' sailed towards Martinique. Good progress in lumpy conditions for the first week. Averaging 135mm a day. Then it got better.

Sunday evening 31st March. Today it happened. Near perfection. The sea dropped out overnight leaving a big lazy swell. The clouds thinned to little puffs of cotton wool. The breeze constant and enough to keep the sails silently drawing. The sun coming from a deep blue sky but not too hot, the sea reflecting an even deeper blue. Dry decks, hatches open, air circulating below. I soaked it all up for most of the morning and then got the old Singer going and repaired a six foot rip in the stemhead Drifter. A very good day.

The crossing took 18 days and on arrival in Fort de France we had a nice surprise being greeted by Ricky and Alfons Brys (Dutch TANGAROA 'BONAVENTURA') complete with crew – one dog, one cat and a baby boy (born in Tenerife). They are looking towards the Pacific but would rather have a NARAI. Found Mike Vine on his TANGAROA Mk IV 'KAYA' in English Harbour, he expects to sell her in St. Lucia. 'WHITE FLYER' with Jackie and Richard Beaven is also there and will be cruising to the islands this coming season. I expect to return in October and do likewise.

I'll enclose the photograph of 'KITTY' becalmed.

If after this summer you are thinking of moving to the West Indies after all, remember I found it just a trifle too warm!

One years' voyage with NARAI (Mk II) TORTUGA

by Marijke de Boer

After 6 years of living aboard and holidays sailing to the United Kingdom, Scandinavia and the Azores, we decided that we didn't want another winter aboard in Holland.

We set sail the 10th of July 1982. The crew was Ronald, myself and Willem and Jos the secretary and treasurer of the Dutch Catamaran and Trimaran Club.

We started with a NE 6. On the Waddensea it was nice sailing in smooth water, but when we passed Texel we found it was closehauled to Shetland and that the sea was uncomfortable. We all became more or less seasick. Ronald had never been sick on his own boat, but due to paraffin leakage and a bad physical condition due to the removal of two teeth, even he became sick.

The weather did not really improve all the way. Near the Scottish coast we had some followiing wind, but also fog and the last 10 miles were hard tacking, Ronald handsteering at 10°C.

Normally we never handsteer at sea. We have a Sharp Tillermate which works perfect. It is placed in a box behind the cabin to keep dry, lines go to the tillers. When the sails are properly trimmed it uses not much electricity. We stay nice and warm in the cabin entrances under pramlike sprayhoods.

We enjoyed Shetland very much, seeing the round Britain racers and old friends; fishing, walking, driving around in a hired car, looking at birds, seals and prehistoric buildings.

We left Shetland with a moderate westerly. South of Sumboroughhead the wind lessened and we were swept to and fro by the tides all night near the Orkneys. As Jos and Willem had only 4 weeks holidays and longed for the Hebrides, we started the outboard. It was calm nearly all the way to Stornoway.

The outboard is a 30hp Yamaha, placed in a chest in the middle of the boat so that the propeller stays in the water when pitching. When sailing, it is hoisted very high so not much seawater can reach it. The underside of the chest is closed with a strong PVC cover, tied around the propeller shaft.

After some lovely weeks in the Hebrides at lonely anchorages, Jos and Willem went back to Holland by ferry. They took the nice summer weather with them.

At first we enjoyed some fast sailing, but then we got some nasty gales and were afraid to lose 'Tortuga' when the anchors dragged. We just managed to motor free from rocks. The reefed mizzen was up to keep the head into the wind. At a terribly slow speed of 1 knot we neared an island which offered some shelter. The 2 kg anchor of the dinghy was thrown behind some rocks and kept us anchored. We took the mainsail into the cabin to lessen windage, it was a force 11. All night we watched the barometer, when it started to rise the wind veered to NW and we dashed back to our former place.

Between the Inner Hebrides and through the Irish Sea we struggled southwards, most of the time tacking, rising very early in the morning to make profit of the strong tides. Sometimes it was beautiful sailing with a northwesterly and a clear sky.

After this we set a parachute sea anchor

In the Irish sea the weather gods did not favour us, the SW wind increased to gale force when it veered to NW, then followed a period of no wind. The gale force days we spent in harbours. In Dun Laoghaire we stocked up for the crossing to Lisbon. Glad we had a good rowing dinghy, even in harbour you became very wet.

The dinghy is a dory, 4m long, which is made to seperate in two halfs, stowing each half upside down in front of a cabin.

South of Ireland we had no wind for 4 days, nice for sunbathing and at night for studying the stars. It was silence before the storm. We got a westerly gale, force 9, just on the edge of the Continental Shelf. We sailed as long as possible due South, because we didn't want to get too close to the French coast. Suddenly a big wave banged on the side of the boat and most of the books and other things were thrown on the floor. Also a section of platform was broken.

After this we set a parachute sea anchor. The boat was really 'anchored' with that, there was an enormous force on the anchor warp, which went over the aft netting beam. We had to watch it continuously and cover it with rags to prevent chafe.

For the first time I could not cook dinner at sea, we ate biscuits and a tin of peaches which made us a bit sick. Again suddenly a bang in the middle of the night. When we lit the decklight we saw that the warp was loose and the netting beam broken. When we pulled in the warp the parachute was gone, the 24 ropes were broken. We think it had sunk too deep and when 'Tortuga' was lifted on a big wave it had first pulled down the netting beam and then it broke.

After this we let the boat just float, she came beam onto the waves but behaved well. The autopilot was no longer useable because of the broken nettingbeam, neither was the wheel, but after replacing some blocks on the railing we could steer, if needed, with the lines of the auto pilot. The night seemed endless.

Next day the wind became less and we repaired the nettingbeam temporarily with some wood and lashings. The mizzen sheet, which normally goes to a track on the nettingbeam was replaced by two sheets to blocks on the railing. On 'Tortuga' we made no bulwarks but slats on pieces of wood; no water stays on the decks and they give lots of possibilities to tie lines and blocks to.

6 days of Portuguese N wind made us forget that frightful gale and we liked sailing again. We sailed under spinnaker most of the time. Only the nearing of the coast was a bit dangerous in fog. Fishfloats and the echosounder made us realise that we were quite close. We arrived the 11th of September, 11 days sailing from Arklow, Ireland.

Lisbon was very nice especially because a Dutch speaking Portuguese lady showed us everything. Also we met some other Dutch yachts. Material for repairs was very cheap. But Lisbon has bad weather in winter, we had to go further south. The Algarve was better, sheltered water, from the N winds. We liked the area near Faro very much with sandbanks and creeks, beautiful shells, birds and good places for drying out and painting and cleaning the boat. The underwatership fouled very much in the warmer waters, during the rest of the voyage, we had to scrub it often.

Sailing to Madeira was 4 days close-hauled against SW wind, rather rough and cold, like the North Sea. But Madeira was worth the effort, beautiful mountains for walking and troutfishing.

I was a bit afraid that TORTUGA would pitchpole, surfing from the breaking waves . . .

From Madeira to Lanzerote – Canaries – we had at last trade-like wind, a really nice beam-wind passage with beautiful sunsets. It took 2 days. We hardly ever sail faster than 8 knots at sea, because it's difficult to sleep when the boat sails faster and it's also easier for the autopilot.

Lanzerote is very exotic: hot volcanoes and a Sahara-like landscape including camels and a lot of real Sahara dust brought by the NE wind. There is a good harbour with moorings so that we could go ashore together.

To Fuerteventura we had an ex-hilarating 4 hours passage in NE 7, handsteering. A big yankee and staysail boomed. We sailed most of the time at 10 knots and surfed a lot. The arrival was dangerous on a leeshore, as we had no detailed chart. Fortunately we had good watertight binoculars and could see the pier in time. We had lowered the yankee already to slow down. I was a bit afraid that 'Tortuga' would pitchpole, surfing from the breaking waves, but she rose from every nose dive, the foredecks never became really wet.

continued on page 15

By Canal to the Med and on to Elba

by John Heath

'Yin Yang' is a TANGAROA MK IV. We took 5 years to build her. A real husband and wife team effort. Gill was responsible for one hull, I for the other. We had our first sail in her in June 84 and spent all the rest of the year in getting as much sailing in as possible. We needed it, our only sailing experiences were two weeks with Bob Evans and a fortnight on a Greek flotilla holiday.

By the autumn of 84 I had got the redundancy I had worked so hard for and with it early retirement and a small pension so that together with the money raised from selling the house and practically everything else we owned we had sufficient income to start new careers in full time cruising. I am still adjusting to the fact that it has really happened – to retire at 50 is like a fantasy come true and our income is small enough to prevent us taking things for granted. We have enough to feed us and to provide money for the occasional treat (sitting here in Elba I am not sure what constitutes a treat). We can also manage the upkeep of the boat. So we are independent and self sufficient and that is another heady experience.

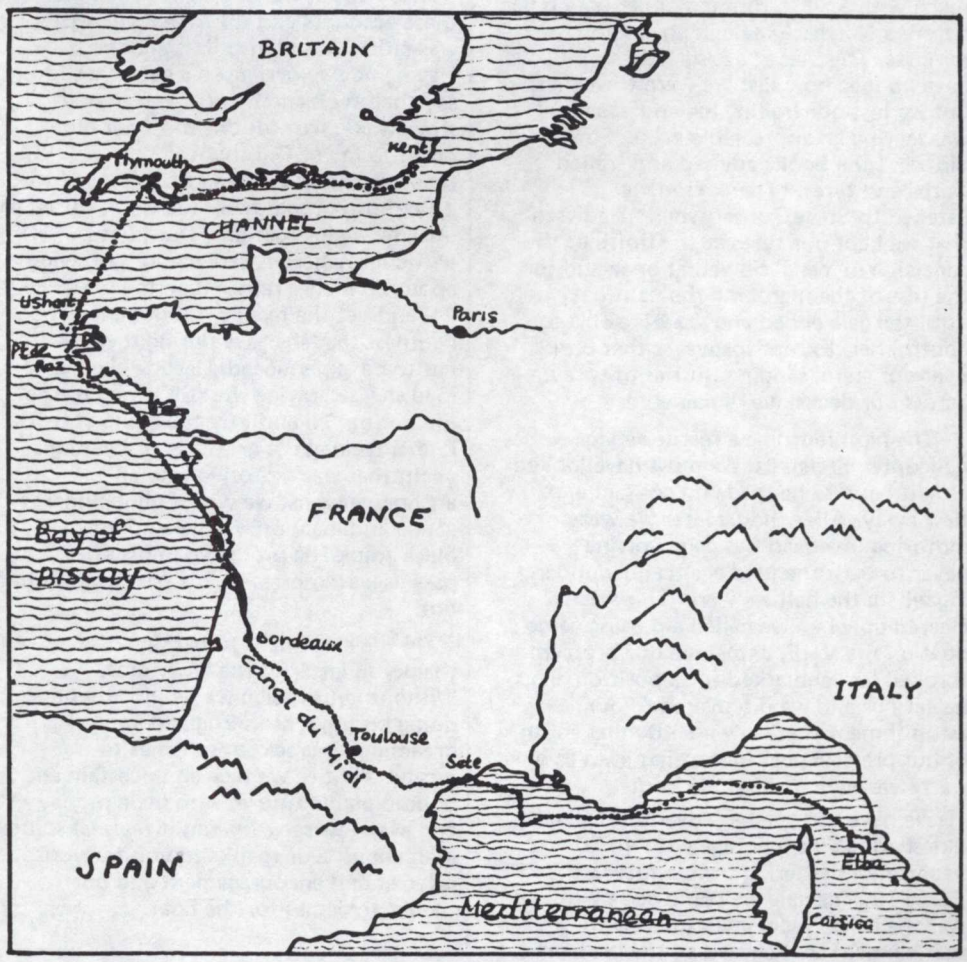
We left our base in Kent on May 3 this year, headed for the Mediterranean via the Canal de Midi. To those people that consider this foolhardy with our limited experience of sailing I can only reply that there were times when we thought it was foolhardy as well, but it is also pretty silly (from most people's point of view) to spend 5 years and several thousand pounds on building a boat, and colleagues at work actually accused me of being mad when we sold our house etc. We had two things in our favour, the caution that maturity brings, and we took the sea and living upon it seriously.

As a result of the caution and the dreadful weather it took us 3 weeks to get to Plymouth. We called there to enlist Steve Turner's help with our engine, knowing that he had a system similar to ours. We had had trouble at the propellor end all the way down the Channel. I share James' aversion to engines and for the same reasons, so I won't bore you with a lengthy description of its problems. Suffice to say that Steve's advice and the welding skills of one of his friends quickly cured the problem.

After waiting for yet another gale to pass we finally crossed the Channel and set off down the Brittany coast. By the time we had dealt with the 'Chanel du Four' and the 'Raz de Sein', the swell, the tides, the pilotage and several night sails, we began to think that we were beginning to get to grips with this sailing lark. Our progress to the Gironde was uneventful and on the whole pleasant, the weather changed for the better as we crossed to France and stayed that way. The journey up the Gironde was fast. The tides run at 4-8 knots so it is essential to take account of them. That journey was probably the fastest we will ever travel under engine.

And so to the canals. As far as this canal system is concerned people should not be put off by the articles that appear from time to time in the yachting press on passages through the canals. In 12 days we saw 3 working barges. We kept as close to the bank as possible and they slowed right down and also pulled over, although their draft prevents them from approaching the bank too closely. After 7.30 p.m. there is no traffic because the locks have closed so mooring stakes don't get torn out by barges thundering past in the night. The process of taking the boat through the locks is very simple and by the time you have gone through about 6 you should have sorted the process out and have little further trouble. The lock keepers are pleasant and patient – whatever mistakes you make they will have seen it all before. We came across only one unpleasant lock keeper for he had missed his lunch which in France is unpardonable, and he clearly believed that it was the fault of those of us who were using the canal. We had no problems because of our beam. We had about 8 inches to spare (4 inches each side) in the locks and Gill who is a better helmsman than me took 'Yin Yang' in and out of almost all the locks (over 100) with no problems at all. I kept hitting the sides. Because of its beam the excessive fendering that you see on other yachts is unnecessary – once in the lock the boat doesn't plunge about like some of the monohulls did. Although in most cases that was because the crew were not tending their warps.

Passage through the canals was a bit like a journey on a royal barge. It is clear that the Wharram cat is an unknown animal in this part of France and we were stared at and waved to every kilometre of the way. We met three Frenchmen who recognised the boat and there



ensued lengthy and difficult conversations in part French, part English and a lot of hand waving. We also met George Payne albeit briefly. He said that another TANGAROA had passed the other way recently. We were mildly disappointed to hear this since it would have been nice to have been first.

We arrived in Sete after 12 days on the canals. It would have been 10 but we were delayed by a broken lock gate for 2 days. This we thought pretty good since in fresh water our engine (9HP single cylinder, air cooled Ducati diesel) will only drive us at 3½-4 knots. This is not much below the official speed limit but everyone else exceeds it. We started at 6.30 every morning when the locks opened and didn't stop until the locks closed at 7.30 p.m. A long day but hardly exhausting and so safe.

Our masts which are wooden couldn't be put up by the marina in Sete because the crane jib wouldn't reach across to the middle of the boat. They let us use their wall at no charge and with the help of a New Zealand couple we put them up ourselves. It took about 5 times as long but it saved us £10 and was more satisfying.

We left the next day and came back almost at once. 12 days on the canals had softened us and we were quite unprepared for all that movement. We should have kept going because when we did leave 22 days later we experienced our first gale ever.

Although you read about the nature of the Mediterranean it still is difficult to believe when you experience it at its nastiest. We went from a pleasant beam reach with a S4 to running under bare poles before a Northerly gale in about 20 minutes. This was at about 1.00 a.m. I have no idea how fast we were travelling but we lost our trailing log and each hull was leaving an appreciable wake. So we did what the books advised and trailed warps and tyres. (Thank God we listened to Steve Turner when he adivsed that we kept our tyres at the finish of the canals) 'Yin Yang' slowed at once and for the rest of the night and the next day, until the gale ended and we were able to control her. Except for waves that broke near our stern, sending flurries of spray across our decks, we remained dry.

The next morning a rescue service helicopter circled us. We must have looked alright because he made no contact and flew away. A few hours later we were motoring in a dead flat calm vowing never to trust the Med again and wondering where the hell we were. This was cleared up when we called a passing cargo boat on the VHF, explained our problem (broken leg) and asked for a position. This he gave us and we discovered to our astonishment that we were 40 miles south of our pre gale position so that even towing warps we were making 3-4 knots.

We have had further adventures since, like sharing an anchorage with 40-50 yachtsmen sheltering from a forecast Force 10. The gale we could cope with, it was the other yachtsmen (marina to marina men) that caused all the problems. They all needed lessons in anchoring techniques, and as a result of their dragging anchors ours, which were holding, were pulled out and we found ourselves broadside on, in breaking waves. 'Yin Yang' was adopting the most alarming angles and we were losing crockery at a rate we couldn't afford. By dint of rowing out stern anchors and then insisting that our little engine worked over and above design limits we survived with only broken crockery.

So here we are in Elba where we intend to spend the winter. We have seen Corsica which is unbelievably beautiful and been seduced by Italy which is so Italian. We intend to spend a good long time in Italy and Sicily. The cost of living is favourable, the climate pleasant, there is so much to experience and the people are wonderful.

Lastly, we have seen some of the most beautiful boats and the most terrible sailors it is possible to imagine. We long to meet another Polycat. Even other types of catamarans are rare. In every harbour 'Yin Yang' collects little groups. We don't know what they are saying but the boat is discussed at length. We are like zoo animals and are now able to carry on our daily life regardless of the stares. Of course whilst they are discussing us they are unaware that we are often discussing them.

As to 'Yin Yang' which makes all this possible, I cannot describe the sense of affection that we feel for her. In the past I have read in the pages of the Sailorman accounts of polycats in gales and bad weather and time and again you read that the people involved never for a moment worried about the boat. I used to read these accounts and think that the writer was either stupid or unimaginative. Having now experienced a gale I have to say that my biggest worry was how to stay awake. Not for one moment did it occur to me or Gill that the boat would cause problems or break up or any of the other horrors that beset me when I used to imagine such situations. Our boat is particularly heavily laden and is drawing about 28 inches rather than the designed 21, and yet the feeling of buoyancy and lightness that she gave during the gale has to be experienced. Despite the heavy load she is carrying she still frightens the life out of Gill and I by travelling at 8-10 knots. We had the great joy of beating a yacht that was motoring into an anchorage whilst we were sailing under genoa and main only. The amount of black smoke he produced in his efforts to pass us was impressive but pass us he could not.

In the end this is something of a thankyou letter to the Wharrams. Without your design we would still be doing boring jobs in England and dreaming up crackpot schemes to escape. As it is, we face an uncertain and unpredictable future, with little money and even less security and it feels absolutely marvellous. Our thanks to you for your interest and encouragement and our thanks to James for the boat.

Question d'Equilibre

by Jean Yves Poirier

I had my first real cruise with my TANE NUI 'QUESTION D'EQUILIBRE' this year. As I knew that going around Ushant even in June is most of the time a rather bad experience, I had chosen a more quiet way: Brittany, crossing through inland waterways. We were three on board, two Wharram builders (PAHI 31) Christian and Catherine and myself. We left the mooring in Rotheneuf with a good forecast and sunny sky. As Rotheneuf is a very protected shelter, we didn't realise the true sailing conditions . . A few minutes later, we were surfing at 12 knots with a strong force 7 wind on the beam. The weatherman had announced a force 3 to 4 wind with a quiet sea!!

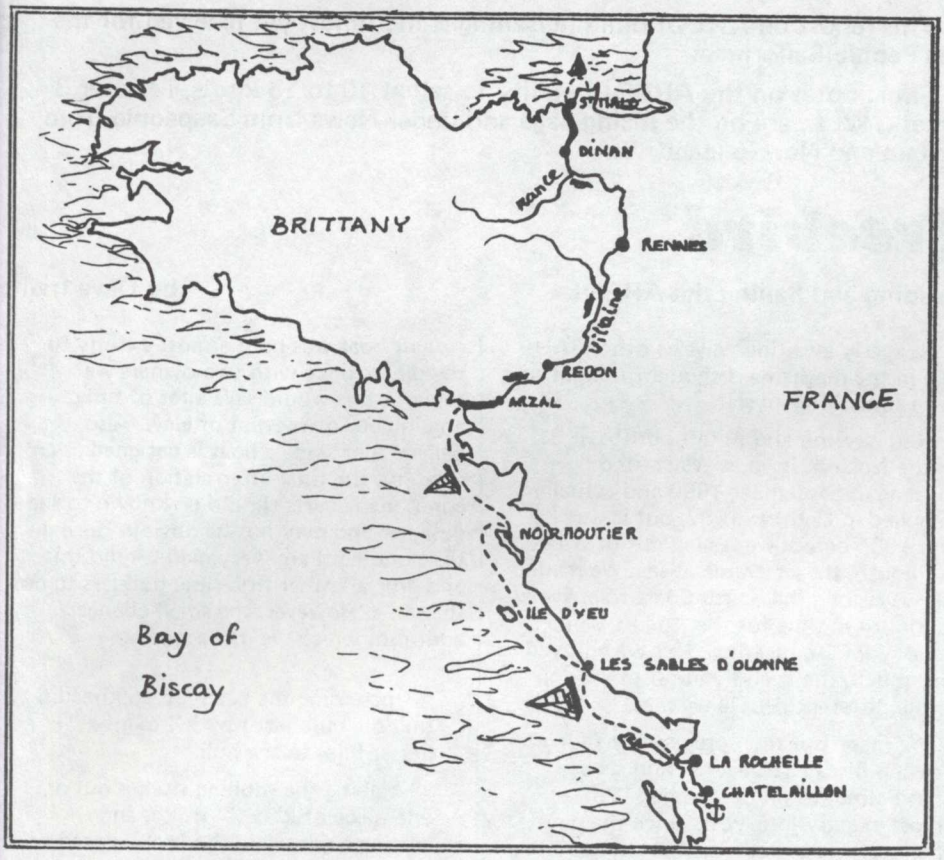
As we were going to windward, we had to tack to reach Rance river which is one of the entries into the canal through Brittany. Tidal currents are very strong in that area (the biggest tidal range — which is around 54 feet! — of the world is here) and we had to be in front of St. Malo at 11 a.m. in order to be pulled into the right direction.

When we were sailing in the middle of the hundreds of moorings which surround the lock of the tidal electric barrage, we had to stop, lower the sails and start the engine. With the main and staysail to keep the boat easy to handle, I reached a small fishing boat and told Christian to tie a rope around a cleat of that boat. Meanwhile I was busy with the engine, sails, ropes . . . . and I didn't see he had just turned a loop around the cleat and made a very strange but artistic knot at the other end.

It would have been funny but the sea was very choppy, the transom of the fishing boat and the bows of the cat were dancing a wild rock. Fortunately, the loop didn't leave the cleat and we crept into the locks without problems.

We began three days of motor-boating down to South Brittany through the canal and Vilaine river. The southerly wind was blowing hard even on the Rance estuary and our Seagull 90 was not powerful enough to make headway against it. I decided to hoist the staysail again to help the outboard and we reached slowly the first lock of the canal where we had to put the mast down. We had done that operation carefully the day before and prepared the cat for the canal trip: fenders, ropes, etc.

At that time, I had limited confidence in the reliability of the outboard, but after



20 hours of hard work I am a Seagull fan now! The surroundings of the canal are sometimes very beautiful and sometimes very ugly (factories, supermarkets), depending on the country we were crossing. We reached Redon in South Brittany where we had to mast the boat again and prepare her to sail away. As one of my best friends was living on board his 35ft. schooner in Redon's harbour, I asked him if he was free to sail with me to La Rochelle. By chance, he was very excited to sail a multihull for the first time in his life and was ready to put his bag on board.

My crew had to go back home, and I had to leave too and go back to work in Thaire for a week. One week later we left Redon to reach the last lock between the river and the sea in Arzel. It took us one full day to reach that place but it was the last to hear the noise and breathe the Seagull's fumes! At 5 p.m. we moored on the seaside. Next morning we left that peaceful place with a force 4 westerly wind. It was nearly perfect, but the sky was grey and low, the wind cold, a true endless winter . . .

We had to tack to leave Vilaine estuary which is 15 miles long, a good occasion to test windward abilities. We had a true 110^0 angle between two tacks with a strong tidal current against us (it was rising tide) and a sheet of the yankee not very well placed (a bad angle of pulling). After leaving the estuary we had a 45 miles downwind course to Noumoutier. The wind was gradually falling, force 2, 1, 0 . . . and our hope to be in L'Herbaudiere before the night too . . We sailed 14 miles in 7 hours, an average of 2 knots. But after Le Croisic, the wind decided to blow again and we entered L'Herbaudiere harbour at 11 p.m. We had had a cruising speed of 7 knots in the last part of that stage. My friend Dominique, who had no previous experience in multihull sailing, was rather impressed because his schooner with her 35 ft. waterline has never exceeded 6 knots at her best with a lot of wind and no waves . . .

If you know somebody who plans to cruise around the South Brittany coast tell him not to stop in L'Herbaudiere! The harbourmaster told us in the morning that multihulls were undesirable here and we had to pay nearly £9 for the night!

Unfortunately we were forced to stay there for a while because the wind was blowing hard with gusts up to force 8 with a rough sea. We heard the forecast which was rather good in the South of that area and we were sailing south . . . We decided to leave in the afternoon and took advantage of a lull to go out of L'Herbaudiere. It was 4 p.m. and, with a more manageable sea and a force 7 wind, a good occasion to test our own abilities and those of our 'QUESTION D'EQUILIBRE'. I remembered all glue joints, screws and bolts . . . will everything be going alright, maybe I have forgotten something important? Is the boom strong enough? And so on. But a few minutes later we began to feel very confident with the cat and, although we were rather wet, we pressed her harder.

Between L'Herbaudiere and the Ile d'Yeu we had an average cruising speed of nearly 10 knots with long surfs of 14-15 knots. At the beginning we had the wind on the beam, then on the quarter, and at that time it was a force 6 only. After the Ile d'Yeu we had to run before the wind, we slowed down to 8 knots with some surfs over a powerful northwesterly swell. At 11 p.m. we entered Les Sables d'Olonnes harbour, we were tired but very happy on that day.

We left at 9.30 a.m. with a shy force 2 westerly wind, it was a big contrast with L'Herbaudiere's leaving! After a very 'family' sailing day, we tied our ropes to the cleats of La Rochelle's pontoons at 9 p.m. Even without a spinnaker we had an average 3 knots, not so bad with a 10-15 knots wind. Today 'QUESTION D'EQUILIBRE' is moored near our home in Chatelaillon. I have many improvements to do on board now, but these are only details, TANE NUI is fast, safe and beautiful, with a superb motion through the sea. Thank you James!

This report on AREOI building/sailing is the fullest yet received for the Sea People/Sailorman.

Short notes on the AREOI's ability to sail at 10 to 18 knots, i.e. over 3 times $\sqrt{WLL}$, are on the racing page and under News from Seapeople from Britain and New Zealand.

Freebird

Building and Sailing the AREOI

by Dave Irving

"Eagerly awaiting news of other PAHI 31's in the magazine, I thought I ought to write something myself.

Ken Newton and I built our PAHI 31' on the Norfolk Broads. We started building in September 1980 and actually launched in October 1982, but it was July 1984 before we sailed out of Great Yarmouth, the first time at sea. We made our way along the South Coast to arrive at Falmouth in time for the August Bank Holiday P.C.A. meeting. This we enjoyed very much, the friendly atmosphere and all the different people we met.

We made our final preparations for crossing Biscay at Devoran and set sail from Falmouth on September 12th — almost exactly four years since the day when we first cut out the backbones in a barn in Norfolk. The crossing to La Coruna took five days. From there we sailed via Corcubion, Corrubedo, Bayona, Lisbon, (where we met up with Jedrek and Seija Pursak on their immaculate TANGAROA Mk IV 'AMANDA'), Sessimbra, Sines, Lagos, Villamoura, and on to the beach at Culatra where Ken spent the winter next to Mike O'Sullivan in his TANE NUI 'HAPPY RETURN'. We are now in the Guadiana River, following Andy Smith's very helpful directions (Sailorman December 1983), and anchored not far from Joan and David Lewis in their Foam Sandwich NARAI 'RANI'. On one day last week, out of ten boats on the river, four were Wharrams.

Our boat was built almost exactly to the plans, since with two owners we thought this would save a lot of time arguing our own point of view. Also, we believe that since a boat is designed as an entirety, the final interrelation of the component parts should be known to the designer and may not be obvious during the building. I am very glad we did this and urge all other first-time builders to do the same. However, the small changes/additions which we made were:

Increasing the beam of Bulkhead 6 (middle bulkhead) by ¾" to give better lines to the hull.

Making the rubbing strakes out of one piece of 2" x 2" Iroko, and cutting a groove in the back instead of planing a flat on the hull (which we thought cut into the plywood too much). Also these are bolted to the hull as well as screwed.

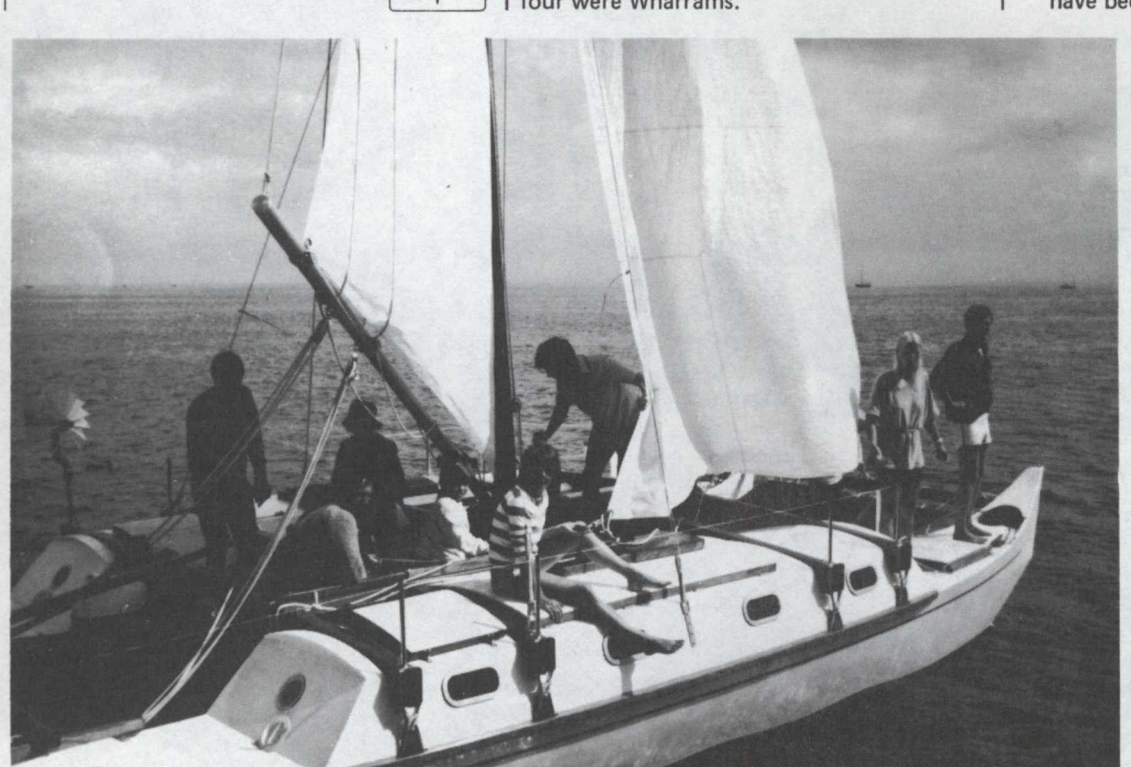
The main tiller is pivoted on the aft netting beam to reduce its overall movement.

A tilting outboard bracket.

A catwalk, which seems to us absolutely essential, as are stanchions and guard rails.

The large lifting hatches are made of three layers of 6 mm. plywood.

Underneath the fore and aft decks have been strengthened.



AREOI 'FREEBIRD' off Falmouth at the 1984 Summer Meeting, shortly before departure south. Dave at helm, Ken on bow

The total construction time was 4,000 hours and the cost £6,700 fully equipped. (1980-81 prices = £10,000+ at 1985 prices). On the subject of building time/cost I am trying to do a survey of amateur boat building by asking people we meet on the way to fill in a questionnaire. I would be very interested to hear about anybody else's building experiences at: Garden Cottage, St. Catherine, Bath BA1 8EZ, U.K.

How do we like living aboard and sailing the PAHI 31'? First of all I think James and Hanneke have designed a very beautiful boat. A yachtsman in Poole said she was the best-looking catamaran he had seen, and a Monohull Skipper, out in the Channel, shouted across to us, "She looks lovely".

That meant a lot to us.

Living aboard for two is possible (in warm climates) but not luxurious. What makes living aboard infinitely more pleasant is the large lifting hatch in each hull. I complained bitterly about these when we were building — the amount of work involved and having to make two more hatches on top of the lifting hatches (eight hatches in total is a lot for a 31' boat). However, the amount of light and air they let in (the sides must be made of white material), and the easy access to the cabins they provide have, at last, endeared them to me. Standing up in the hull with the hatches up you can see straight into the cockpit and pass out drinks/food with no feeling of being shut in down below. There is a penalty of course, and that is, when they are down, access is very awkward and dangerous through the small top hatches. Any spray which comes in goes straight onto the chart table.

She is a handy boat to sail. The large cockpit gives good access to the halyard winches and to the boom for reefing. She is very responsive to the helm and manoeuvres well in confined spaces under sail and power. In smooth water she will tack through 100°. The dagger boards don't seem to make much difference except to increase weather helm. Force 6 is the strongest wind we have encountered so we cannot report on the heavy weather performance. Going to windward in a sea, the flexible hull connections and the slack rigging take a hammering and we have to reduce sail very early.

I am not convinced about the advantages of flexible hull connections — of the PAHI type anyway. When the hulls are moving in a sea the beam lashings are alternately going tight then slack. When they take up the tension after being slack they do so with a snatch which seems to increase the stresses rather than lessen them. When the front of one hull is being lifted by a wave, this is resisted by tension in the outer lashings and compression on the central bolt. However, these are only about 2' apart. In the traditional Wharram system of bolts going through rubber blocks, in a similar situation, tension is provided by the outside bolts and compression by the inside rubber blocks. These (on a boat of our size) would be about 4' apart with a resultant halving of the stresses involved. I would like to fit rubber blocks under our beams to get back to the old system except that tensile forces would be taken by the lashings, instead of bolts, and the central bolt would be for location only.

Rob Ayliffe, in his report of his AREOI racing at 16 knots, makes no comments about his beam fastenings. However, this does not invalidate David Irving's observations, particularly about the beam bolt perhaps increasing stresses rather than reducing them. They are, by the way, there to prevent the hulls separating. They could be quite easily taken out and replaced by wooden locking blocks as on the TIKI range, as we propose to use on the PAHI 63. Could PAHI owners, please, send me feedback, similar to David's, for a general concensus: beambolts or no beambolts?

We have fitted diagonal bracing wires to relieve the cabin tops/beam boxes of stress when one hull is trying to move forwards or backwards relative to the other. Without these we thought that the beams were trying to twist the beam boxes/cabin tops in a fore and aft direction. The traditional designs have large flat decks to resist this, but our cabin tops have so many holes cut in them that there is very little fore and aft stiffness left.

This is beginning to sound like a list of complaints, which it is not meant to be. With a new design I think it is important to list all experiences and compare them with other people's.

Lastly, we don't like the cocked-up boom. It makes it awkward to move from one hull to the other when sailing. It is fiddly and time-consuming to remove in order to fit the deck tent. Being angled up it is necessary to slacken the clew outhaul before you can lower the luff when reefing or furling. We should fit a conventional boom about 2'6" above the mast beam.

David is not the only person who prefers the conventional boom 2ft. 6 in. above the mast beam to the cocked up boom. Our alternative is to use the same sail and a wishbone boom similar to the PAHI 42 rig.

Having said all this, she has brought us here, 1,800 miles, safe and sound, and taken us to places like Culatra and Devoran where the million dollar yacht moored next to us in Lisbon could not go, and brought us into contact with lots of friendly people.

Last of all, thanks to Hanneke for her patience listening to our problems when building, and to James and Ruth for their hospitality in Devoran.

On our last jaunt to Gibraltar we saw 'Freebird', anchored there for the winter. David was away; he had been sailing on Peter Phillips's racing boat. 'Novell Network'. Ken Newton, the co-builder of 'Freebird', read out a hilarious letter from David describing the lack of physical comfort and the problems of trying to scoop up a bucket of water on the narrow down curving sterns when proceeding at 20 knots. I wish, we could have published the letter.

continued from page 10

Fuerteventura is very desert like and has leeshores on all sides because the sun makes the air rise over the land. So we left next day for Las Palmas, a very big western city, but a safe harbour with good bus connections and an airport. We had to stay there 2 months, because of illness of Ronalds mother.
First Ronald went 1 month back to Holland to see her, then I. For us it was good not to see each other for a while and to see family and friends in Holland.

After this it was too late to cross to the West Indies. Also we didn't want to go further from home, we wanted to be able to fly to Holland again in case Ronald's Mother died.

We spent the winter rather nicely in the Canaries, though it's not really good for sailing. Hardly any sheltered anchorages, hardly any wind on the S side of the islands, too much wind between the islands. Glad there were not loads of tourists on all the islands. We liked the Western islands the best, they are quiet and green.

The way back to Holland was a real struggle, first 600 miles tacking to the Azores, where we had 10 very nice days, meeting lots of friendly people. Then 1200 miles to Ireland, of which the first 9 days were N-NE winds, some days gale force. After a day of calms to recover, we had 3 days of rather strong SW wind.

In the gales, we used instead of the parachute a car tyre, the boat still moved at 5 knots, but was comfortable, there was much less strain on the boat than with the parachute. We still had a new parachute, smaller than the first one ($3m^2$), but only for use near a leeshore.

For me the way back was no fun at all, being pregnant I was sick all the time. It was good that Jenny sailed with us to assist Ronald (she had sailed a TANGAROA with Don Melhuish before).

While in Ireland, Ronald flew to Holland again to see his mother for the last time and also to find a job. He got a job, so we really had to hurry back to Holland. Jenny had a job too, she went by bus and ferry to London. Ronald did not want to risk another few weeks with me sick, so I went by bus and ferry to Holland. Ronald sailed with a friend, a mans voyage. They hardly slept.

They had very little wind, alternated with thunderstorms and endless tacking. The outboard brought them over a flat calm North Sea. Fog and a re-located lightvessel, North Hinder, gave some trouble with navigation, the latest notices to mariners were not studied yet. They managed it in a week from Cork to Groningen. The masts were lowered in the canals.

After arrival we emptied 'Tortuga' completely, the waterline rose 30 cm. We started living in a house and sold 'Tortuga'. A car was bought which can pull a trailer, a small boat gives less work and more fun. . . . though once more sailing on 'Tortuga' with the new Owner in calm water, I felt a bit of nostalgia and looking at our colour slides I realise how nice the voyage was.

Coastal Trekking

'COASTAL TREKKING' means more than a method of construction, more than a trailer/sailer boat, it is also an attitude of mind.

Glen Tieman's article on sailing his 26 ft. PAHI (TIKIROA class) 'PEREGRINE' from Mexico to Hawaii illustrates this attitude. After sailing down the Mexican coast from San Diego to Gabo San Lucas, not wishing to spend $100 to go through the Panama Canal, he headed out across the ocean to Hawaii.

With homemade oilskins, a leaking hatch (cursing the designer), a mast falling down, Glen represents the Coastal Trekker at large.

Mexico ——— Hawaii

by Glen Tieman

When I last wrote I was planning to continue south to Panama. By the time I reached Acapulco though, I had so little money that I didn't think I could afford the $100 deposit for the canal transit. Not wanting to beat against the trade winds for 2,000 miles back to California, I left for Hawaii by myself. It was a mistake to depart from so far south because there are only light headwinds to 1,000 miles offshore. After a week of slow progress a gale came down so I sailed back to Mexico to recover and reconsider. I did manage to make a lot of progress up the coast so it wasn't a completely wasted attempt. I also learned a lot. i.e. that my foul-weather gear was worthless, my watch not waterproof and my hatches ridiculous. The design award for those hatches should be a bucket of seawater delivered to the face while sound asleep!! *(Hanneke has changed the hatch design — Ed.)*

I met a fellow back in Mexico who was anxious to make the trip and willing to pay for the necessities, so Bernard and I left from Puerto Vallarta arriving in Hilo Hawaii after five weeks. Since foul-weather gear was unavailable we made our own by glueing upholstery vinyl together with contact cement. The hatches were sealed by glueing canvas covers around the leading edges. Both methods while seeming half-baked were very effective.

Puerto Vallarta was an excellent place to depart from because 300-600 miles out lie the Revillagigedo Islands. These were the most interesting islands I visited in Mexico with steam vents, sulphur deposits and forest trails with mountain goats. All most welcome sights during this time since getting offshore, away from the diurnal winds, which was the most tedious part of the trip.

The day after leaving the last island in the group we entered the trade winds and from then on we averaged 140 miles a day with runs up to 190 miles on some days. Until the last few days we broadbeam reached in 15-25 knot winds and 8-10 ft seas.

This is the best course for self-steering using the jib sheet rigged to the weather side of the tiller. I found that reducing the force on the tiller with block-and-tackle, sometimes using 4 to 1 reduction was a great help when reaching. Self-steering works especially well on a broad reach because when too far off the wind, the blanketing of the jib behind the mainsail has a very powerful effect. The last days we sailed wing-a-wing dead before in lighter winds, and I discovered that using the blanketing effect she would self-steer on that course also. The jib was boomed out and guyed down, then the sheet was taken to the tiller on the same side as the jib and, as always, balanced with elastic. So who needs auto-pilots?

The days passed with Bernard and I staying below in our individual hulls reading, except for meals and sextant sights. A few times a day I would stand holding a shroud and watch 'Peregrine' move. Sometimes surfing, she was always at such speed that spray would sheet across her decks. Every minute or two a school of flying fish would leap out of the sea, like insects off the surface of a pond, and bank off the wind with the sun glinting off their white bellies. Porpoises visited us periodically and a large shark circled the boat rubbing and frolicing until it got too frisky with the rudders and I sent it away with a jab from a pole.

Exactly halfway across, within a few miles, Bernard was cooking dinner while I steered a bit further downwind for ease of motion when the sails began moving faster than the boat. Bernard looked at me with an expression of, 'What are you doing?'. Then noiselessly, gently the mast and sails tumbled over the side and lay in the sea as the boat came to a stop. Dismasted! 1,000 miles from the nearest shipping lane with no radio, no engine.

I held down the mounting panic while we pulled the mess aboard. A nightmare come true but I'd planned for it after all, and at the worst it would be a slow passage to Hawaii with no rig but downwind we'd arrive eventually. After deploying the parachute sea anchor to hold her stern into the seas and ease the motion we got a night's sleep. The mast had fallen because a shroud broke at the splice at the top. I think the ferrous steel wire rope was touching the alluminium mast and the resulting electrolysis did it.

At dawn I spliced a strip and a thimble into the right length of spare wire rope and within a few hours we were sailing again. I wasn't sure it was possible in 12 ft. seas, but raising the mast was no problem using a ginpole and guys on both pole and mast. I underestimated the speed and effect of electrolysis because during this same passage two alluminium carribeeners rated at 3,000 kgs. broke while connecting forestay to bridle. Luckily, I had lashings in place as backups. I've never had a surprise with lashings.

One evening, a few days still from Hawaii, I turned on the AM radio and, to my delight, the band was filled with Hawaiian stations. Finding one from Hilo, I waved the set around and sure enough the null was dead ahead. That was the happiest day of the passage. I knew we'd made it.

I've been here in Kona (the southwest side of the big island) for about two month and have taken a side trip around Maui, the next island west. In spite of the high cost of living here, the living is high indeed, even for those of us without much money. The islands are volcanic and high, clothed in green and tropical fruits and flowers. Mangoes, avocados, papayas, lychee, breadfruit and passion fruit all fall along the roads and rot, while the stores get exorbitant prices for the same.

Sailing in Hawaii is difficult. Most of the anchorages are on the leeward sides of the islands and where the mountains and channels allow the trades to squeeze through, they come through with frightening speed. All four channel passages I've made have been rough in the extreme. The one upwind passage between Maui and Molekai was done with both mainsail and jib double reefed. Most boats here motor in the morning when there's no wind, and then go in a hide, but now that isn't sailing is it?

Now that I've lived with the leeboards for some time I'll give my opinion. They are an unnecessary complication, and I wish I hadn't built them. This opinion may change in time since they are certainly not yet fully developed but their effect on leeway and trim is very, very subtle. It seems the wingsail rig is so free of drag that there is virtually no leeway to correct. The one possible exception which may prove the board's worth is when using two jibs but this isn't fully developed yet either. I've found it necessary to tie the boards forward to keep them down even with the lead in the ends. When they're up they are slammed into the crossbeam and lashing blocks by

big waves. Still, I haven't quite given up yet.

Also in the negative comments department is my opinion of the long battens in the mainsail. *('PEREGRINE' has the TIKI 26 rig which is a bigger TIKI 21 rig. The sail of the TIKI 26, as shown on the plans, has NO battens – Ed.)* They generate a great deal of chafe and also tend to try to rip out at the forward ends. The next mainsail I make will be either battenless with a slightly longer gaff or will only have the top two or three battens or, at most, every other batten.

The final answer to the problem of the main hatches, I hope has been to add another coaming outside the hatches with a cover at each end that the hatch folds over and slides into. I also raised the inner coamings ¾" so that there is a waterway under the hatches.

Remember that I built my hatches so that they don't join in the middle so that I can enter in the middle. I know this isn't very clear. Other than these few details my TIKIROA has been a champ. I feel that her seagoing potential is very great and the more I ask of her the more confidence I have in her ability. My own seagoing potential has proved greater than I imagined also. I can't imagine a more fulfilling lifestyle than to see the world from the deck of a catamaran.

Thanks again for my wandering canoe – "Peregrine" The ocean cruiser!

Philosophy & Practicality

the TIKIROA Design

by André Viljoen

Before I started building, there seemed to be a thousand unanswered technical questions and a great deal of uncertainty about my own ability. However, once work began, confidence came, and also time, the time which each simple operation takes. It was then, I started asking what it is that produces such a strong desire in one to want to build a boat?

The built boat answers four great needs, needs of 1. territoriality, 2. a home 3. mobility and 4. satisfying the creative urge. When completed it becomes our magic carpet, our castle and our island.

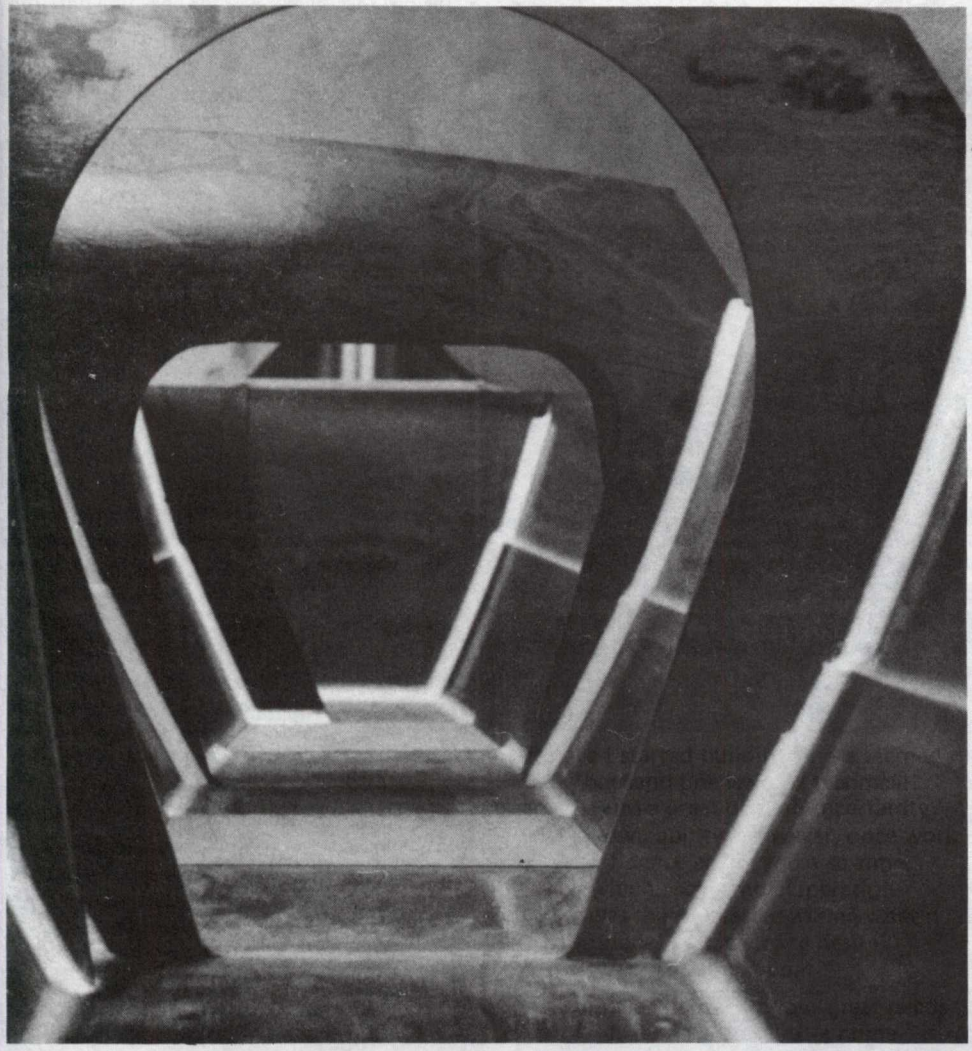
Usually these forces act independently as they have for generations, working through individuals and entire nations. So today one seeks a house, land and a car.

Yet in the boat all of these are rolled into one! I cannot think of another object which lays claim to a place as does a boat when at anchor, and still has the ability to move off and claim itself a whole new environment.

So why choose a Wharram Catamaran? Cost and building technique obviously come into it, the London Boat Show has proved this in many cases, for example, the wood for a TIKI 21 mast, cost about £40 in 1983, a fully rigged aluminium mast for a TIKI ROA (26') could cost as much as £700. Things like that have a way of putting James' and Hanneke's work into perspective.

Yet there are other reasons beyond these, think of a ship, as one would as a child, think of the drawings children make, the long low hull on a wavy sea, the overhanging bow and stern, a good low cabin and raked aft masts. Think of it as a ship, and then the first TANGAROA. One sees how the image has been lingering in our subconscious.

Continuing these ideas you wonder what is the difference people find in the form of the 'Classic' and 'Pahi' designs. The obvious one is of line and volume. The 'Classic' designs are built of lines, sweeps of line, very male with obvious phallic symbols, the swelling stem and stern posts. Equally the more complex volumes of the PAHIs swells blend together to give sensuous compound curves. The PAHI shapes you want to hug while the 'Classic' designs make you want to run along screaming about the line.



. . . while the interior is the comforting womb . . .

More generally, for each boat, it is the exterior which has the male feeling of cut and thrust while the interior is the comforting womb. Some would say the exterior is the ice cold shower of a Borstal and the interior the coffin of our destiny. I hope that I will never feel that way.

Coffins and Borstals lead to cabins and deckspace. In choosing the type of boat to build, it was reading 'The Stable Multihull' article which made up my mind. Once that problem was out of the way all the other advantages came flooding in.

The deckspace, the trade off between deckspace and cabinspace. Once a place for sleeping and shelter has been provided then deckspace is most advantageous. In warm weather there is no question where you would rather be. When it is raining, as in Ireland it rather frequently does, then what can you do? In a monohull the choices are not unlimited. To steer it there

is the cockpit and sailing means wind and rain. So the helmsman and the crew are wedged in place looking up or down at free skies and seas, fairly well unable to move. On a Wharram you still get wet, some people think that it's only on a Wharram you get wet. If not on the helm you have space and can move about safely, somehow being able to stand in rain is better than being forced to sit in it.

What is the building teaching me? Firstly, patience, no matter how simple and elegant an idea, how easy it is to see how the pieces of the boat fit together — they take time to be put together. This leads fortunately to one seeing the parts of the boat as only parts and not whole universes within themselves. So if there is a mistake in cutting something, well it is only one mistake in very many pieces and not worth agonizing over for days and nights.

Once my hulls started coming together, questions of actual performance loomed large. For the sake of sanity and to avoid instant anguish, I came to the following conclusion. When considering performance for a cruising boat, one should not ask, how much faster can I go, but how fast do I want to go. It is of course only substituting one question for another. I knew that the 'Classic' designs would perform as well as fast monohull cruisers and that the 'Coastal Trek' boats would be faster. So, how fast is fast enough?

For a given design there is only control at lower windspeeds. Above about F4 the working rig should be perfectly adequate. There is no free choice involved when considering performance. If you want maximum speed below F3 you have to pay for it in cash and possibly safety. So how fast is fast enough in my 26' TIKI ROA? A hundred miles a day? That's surely still reasonable on a small boat and it's an average of just over 4KN made good.

From the reports of TIKIs and AREOIs sailing, one would expect the TIKI ROA to reach around 8-9 KN at Force 4. So what's there to worry about? Maybe the motion at that speed on a 26' boat.

High speeds also affect what equipment can be used, take logs for example. A trailing log is the simplest and probably the most reliable. But many are accurate only up to 10 K, for example the Walker Knottmaster cannot be used above 10 K, only the more expensive Walker Excelsior MKIII. Fortunately Wasp produce an economical 0-20 K trailing log, but it must be specified when ordering.

Other practical considerations have had to be looked into while building. One being what to do if the boat is holed below the water line while sailing. In the TIKI ROA the cabin sole is solid and fixed with epoxy fillets between the hullsides, and central hatches give access to the bilge space between the bulkheads. Since the cabin sole is fixed above the water line a hole would be most likely in this bilge area. The access hatch is simply a piece of ply wood layed in place on 2" x 1" ledges. So, provided you make no limber holes in the bulkheads, in the event of a holing one could smear a flexible sealer around the hatch edge and then nail screw it closed, thus stopping the water from getting beyond that one bilge section.

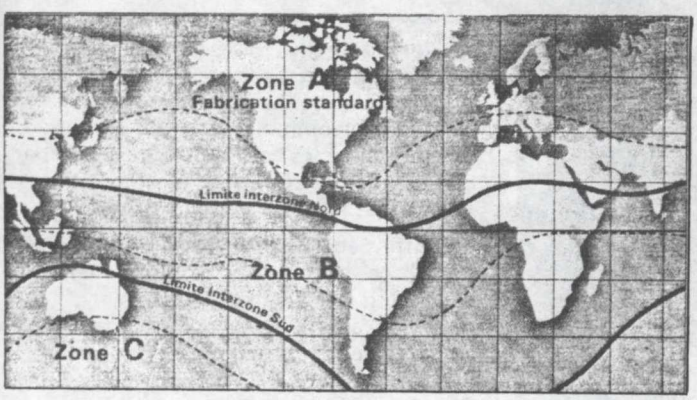
In fact a new product called RX 100 and distributed by Holt Allen in the U.K. might help in the above problem. It is a foam in an aerosol can, which may be used as buoyancy but also can form structural bonds, and it requires a damp atmosphere to go off. To fill a hole in the topside, one gets a plastic bag, puts some water in it and sprays in the foam. A spongy mixture is formed, which goes hard in a few minutes. So while soft, one plugs the hole and then waits until the stuff hardens. Obviously its not meant for use in a jagged hole below the waterline, your plastic bag might tear on the edge while you are trying to stem the fountain.

Installing the compass will be another simple job, but one requiring some forethought. To avoid excessive deviation being caused by your engine the compass should be mounted at least 3' (1m) away from it and 2'4" (70cm) from repeaters and other compasses. If an electric bulb is used to illuminate it be sure the supply is D.C. and not earth return. That is, there must be a positive and negative wire coming from the battery to the bulb and in order to avoid any magnetic effect, these two wires should be twisted together for a length of at least 1'8" (50cm). Also, when buying a compass, be aware that the card is balanced so that it will be horizontal when in use. The closer a compass is moved towards either pole the more strongly that pole pulls down the corresponding edge of the compass card. So, in the Northern Hemisphere the card tilts downwards towards the north and vice versa in the Southern Hemisphere. Compass manufacturers use weights to adjust for this and have divided the earth into 4 zones, the Northern and Southern Hemispheres and an equatorial zone, see map.

If you use a compass outside of these zones its accuracy is not, I understand, affected but the card is no longer horizontal and hence is more difficult to read, and there are greater chances of error due to parralax etc. *(It is interesting to note that John Margarson (see Ocean cruising) did have a Northern Hemisphere Compass actually get stuck in the Southern Hemisphere — Ed.)*

Compasses bought locally will be balanced for that zone, but if you mail order one from the U.K. to Australia for example, be sure to specify that you want it balanced for use in the Southern Hemisphere.

Balancing the card of the magnetic compasses regarding the navigation area



The horizontal component of the total magnetic force of the earth acts on the card which deviates and the vertical component gives to the card a dipping motion towards North or South.

Depending on the area, the intensity of this component varies, that is to say that a magnetic directional system balanced in Lorient will no longer remain horizontal in Numea. It will gradually swing proportionally to the course to South followed by the boat and will no longer be of any use for the helmsman.

Four different balancings are available for each type of compass (same part number for all four).

1. Zone 1 — Standard Production

North Hemisphere. Value of the vertical component: + 0,20 œrsted. This area covers all the Northern Hemisphere, there is thus only one balancing.

It is not necessary to mention something special when ordering compasses for use in this area.

But below the geographical Equator those compasses will dip. Do not forget to mention the areas in which the compasses are going to be used when ordering.

2. Zone B

Value of the vertical component: — 0,10 œrsted

- South Atlantic
- Indian Ocean
- Central Pacific (Pacific Islands and Indonesia)

It is the perfect compass for circumnavigation. It dips towards North in France, is horizontal in Abidjan, Rio de Janeiro and the Pacific Islands latitude, dips towards South in New-Caledonia and can still be used in the South of Australia.

3. Interzone B-C

Value of the vertical component: — 0,35 œrsted

- New-Caledonia

4. Zone C

Value of the vertical component: — 0,50 œrsted

- South Pacific
- Central and South Australia
- New Zealand

Circumnavigating the Balkan Peninsula

The Vikings were 'Coastal Trekkers'. They could sail far offshore, but with their shallow draft ships, they sailed up river far inland. Josip Pavlinusic, in his circumnavigation of the Balkan Peninsula, by river and sea, has completed a remarkable journey, the sort of trip that the Swedish Viking traders were making by coast and river, across Europe to Mikelguard (Constantinople). I know of no modern yachtsman, who has made a similar trip, and for those of you who are thinking of 'Coastal Trekking' these waters, Josip Pavlinusic is the man to consult.

by Josip Pavlinusic
Viroviticka 20
41 Zagreb,
Yugoslavia

After taking his HINEMOA 'TALANTA' down the river Sava to Belgrade and then down the Danube to Michurin/Bulgaria on the Black Sea (ca. 1000 miles) – see 'The Sea People/Sailorman' no. 2, page 23 – Josip continues the voyage:

In the summer 1984, Katia and I went to Bulgaria and found our boat in a good condition in Mitchurin. With the help of hospitable Bulgarians, I repaired the broken skeg and away we sailed towards Bosporus. The sail from Burgas (where we cleared customs) to Istanbul took us 34 hours. or two days and one night, for 123 miles.

About midnight while motoring in a total calm we had the company of a dolphin family for more than one hour. Three of them "towed" us swimming in front of the boat, while others, 3–4, probably their children, played all round and dived from one side to the other below the hulls. Under the ¾ moon one could watch their small glistening bodies below the water while passing the shade of the boat. Their visit was greatly appreciated for they have not much reason to trust people: in the Black Sea the dolphin-fishery is very popular, especially by the Turks. Probably, they identified the hull-shapes of a catamaran as friendly ones.

In Istanbul we enjoyed the hospitality of the shipping agent for 4 days, with no charge at all for a mooring along his launching ramp in Buyukdere. He even took us for a sightseeing tour through the old town and museums.

We cruised Aegean Greek waters for a month, sightseeing and hopping from one island to another. At Skiathos, Northern Sporades, amongst about one hundred of yachts, some of them being English and French multihulls, two drew the most attention: the 1000-ton "Pegassus" under Liberian flag, – and a small Wharram from Yugoslavia. Moored between the monotonous white fatty monos, 'Talanta' looked like a "Cutty Sark" in the fleet of the modern cargo-monsters.

There is an opening bridge between Eubeoia and the land in Chalkis, which did not work. We passed it owing to our ability to lower and re-erect the mast without the help from outside. In Greece we missed a pure human contact with domestic people. The only possible relation was Money-goods. To pass the Corinth canal we paid $35; more than the bigger boats pay to go through the Panama Canal. At the other side, there were no harbour-dues in the crowded small ports of Greece.

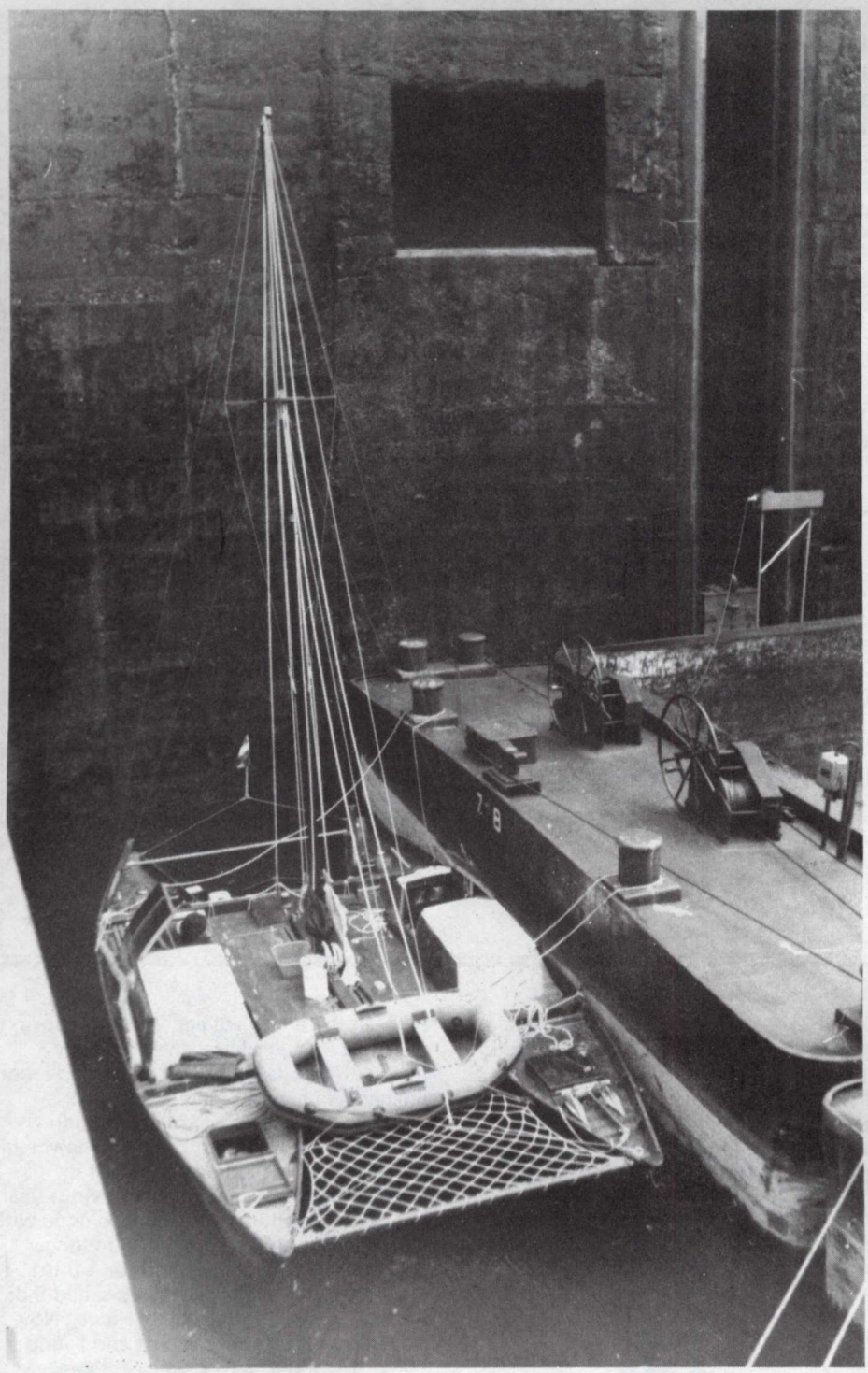
Portrait of a 'Seawolf'

On the entire voyage from Mitchurin to Vodice in Yugoslavia, there were no dramatic or dangerous situations to report. Where we failed, 'Talanta' worked. Somehow, I have got the impression that this boat had not only the seaworthiness, but also a seamanship built in. After the experience of the previous year we worried about our ability to cope with all the difficulties, especially on longer legs of the trip, and wished for a third crew. At the end we non-stop sailed 5 days and 4 nights from Corfu to Herceg Novi avoiding the Albanian coast and found that it worked pretty well. 'Talanta' sailed for hours with the tiller lashed, perfectly balanced under main and jib, or under jib only in a stronger wind. The non sleeping-watch had only to care about the traffic, which was easy, being between the Albanian coast (at the safe distance of about 20-30 miles) and the shipping lanes. With genoa or yankee (in lighter wind-conditions) she is a little weather-helmed. We found it very usefull, a boat which steers herself in rough conditions.

This summer will be no cruising, as the third crew is under way, arriving towards the second half of the sailing season. In the meantime, I will take part in the building of a third Yugoslav 'Wharram': M.Vuksic and H. Klakocar's TANE NUI.

(We hope the "third crew" arrived safely and is progressing as well as our new crewmember – Ed.)

Now something about engines, inspired by the article in the last issue. I



'TALANTA' in the lock of Djerdapdam

read the articles about the subject in the previous numbers of "Sailorman" and "In the Wake", but did not notice anybody mentioning the manoeuvrability of the catamaran when talking about the arrangement with the engine on the deck and a long shaft between the hulls. This arrangement is possibly the second cheapest solution, after an outboard. As our catamarans tend to remain economical in building, people try to find a cheap arrangement for engine installation (and simple) as well. However, one should bear in mind that such an arrangement leaves the boat almost unmanoeuvrable at a lower speed, i.e. in harbour and similar, when the manoeuvrability is essential.

The efficiency of the tiller is in direct proportion to the water flow on it's surface. In the case of a catamaran, water flow equals the speed of the boat; very different to the monohull, where the propeller even at low speeds can create a remarkable flow against the rudder-surface by a sudden increase in revs. This flow is then faster than the actual speed of the boat. That makes the monohull manoeuvrable even at very low speeds. For those who cannot resist the engine installation, a third tiller would be a solution. Or only one tiller in the middle, behind the propellor. If one tiller can steer three hulls of a trimaran, why shouldn't it steer two of catamaran? A competent analysis from somebody with more experience or theoretical knowledge would probably be interesting to other readers and builders too.

Sailing

SELF STEERING (TEHINI)

by John Shores

On the sixteenth of August after a happy year of living and cruising in Portugal and Spain, we sadly said goodbye to our friends and sailed for England.

This is a voyage of some 1,000 miles against the prevailing Northerly Portuguese trade winds, the same winds that took us to Cascais (near Lisbon) in 5½ days the previous year, only on that trip we had a stronger crew, this time we would have an effective sailing crew of one man, one woman, and a twelve year old boy:— myself, Amelia, and Luke, with Genevieve (10) and Daniel (7) able to contribute in other ways.

"Its a tough trip. Took me over three weeks. You'll have to sail to the Azores before you head North. Wharrams only sail off the wind". Well we all know by now what a load of b---x the last statement is. So after listening politely to the advice, digesting some, and discarding the rest, we left.

Well it was not a bad trip, we reduced sail often and early for a comfortable ride, but even so arrived in Falmouth after 15 days somewhat weary but not unduly so.

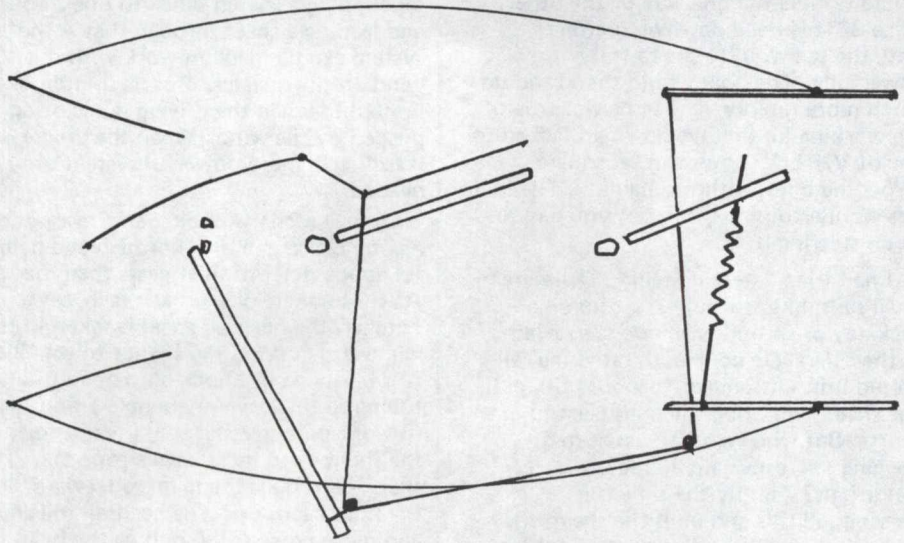
We had the expected Northerlies to Finisterre and beyond, with the odd bit of variable and calm thrown in as we got into Biscay.

The long expected and hoped for South Westerlies did'nt materialise until the thirteenth day out, but when they came they brought with them the familiar Channel weather, drizzle, half mile visibility and a rising wind, eventually finding us under bare poles with a big sea running. I think we all thought of the Portuguese sunshine then.

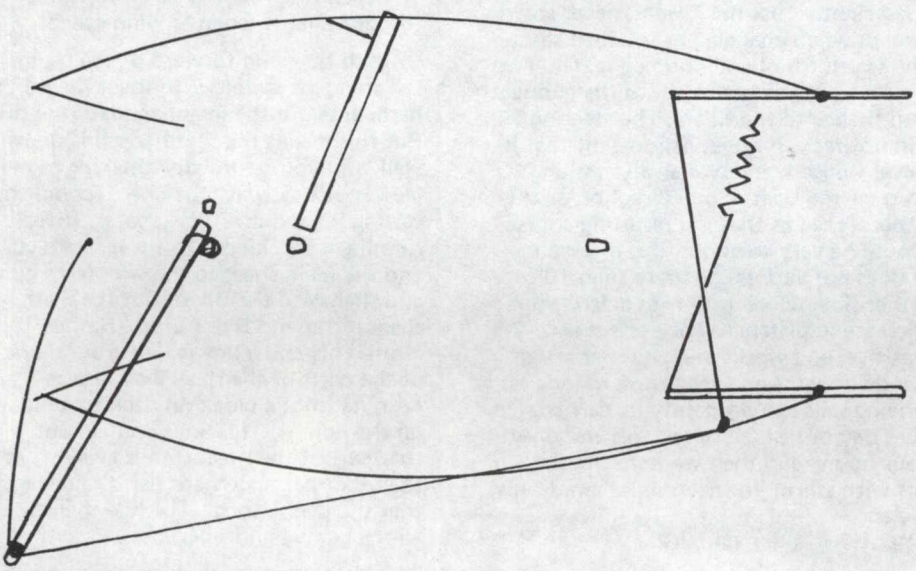
The wind eased, veered North, then increased again, giving us a Northerly gale to slog into up past the Lizard. We saw much helicopter activity that day, and later learnt that two yachts had been in distress. We were O.K. if uncomfortable, but none that go to sea can afford to be smug!

One important factor in the relative ease of this voyage was the self steering, not with expensive vane gear, but with sheet to tiller techniques. Self steering to windward is easy on these boats, simply by lashing the helm, with adjustments possible on the headsail and mizzen sheeting, and on the amount of helm to harden up or free off a bit.

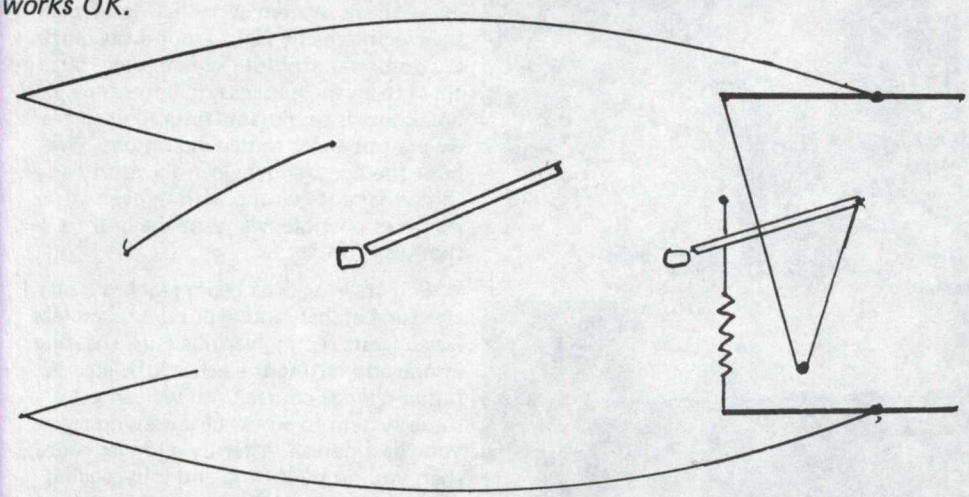
The further off the wind you go the more complicated it gets, requiring sometimes a good deal of fiddling to get the



Control line rolling hitched to staysail sheet. This system is very effective right up to a broad reach. Bearing out pole (found on beach) simply keeps control line clear of stays etc.



This works well with the wind on the quarter. The inboard end of the bearing out pole is held by an endless strop, dropped over one of the bitts. Another time, I would prefer to have twin staysails for off the wind, but this works OK.



This system I used close-hauled and reaching. Simple to rig. Increasing windspeed on mizzen pulls helm up and stops boat bearing up.

required course, in fact quite often you don't get the exact course you want, but when you are well offshore, a bit of extra distance sailed is worth trading for not having to hand steer.

For elastics I used six lengths of surgical tubing which was adequate, but only just. I think that for a vessel this size a steel spring would be more suitable. Also the rubber deteriorates very rapidly unless well smeared in glycerine.

I tried connecting the sheet lines to the wheel, but this was not sensitive enough, nor did it provide enough movement, so I had to connect up to the tillers, or the steering ropes, but this can be seen more clearly from the diagrams.

For self steering downwind next time I would use twin headsails well veed forward. I've not used them yet, but it is well proven and has got to be an improvement on the single headsail boomed forward with the mainsail, although that worked well enough, but I don't like using the mainsail for long periods downwind even with a boom vang.

To sum up, these sheet to tiller methods are a bit messy, they can involve cats cradles of rope to operate, but they do work, and they work using gear that most cruising boats carry anyway.

These methods enabled Amelia and me to handle the night watches (mostly below) of 5 hours each, with 5–10 minute horizon scans and half hour compass checks and a walk around the decks; and Luke to do the dawn watch, thus allowing us a good quota of sleep, and to be reasonably alert and well rested after 15 days of this routine.

'YIN YANG' has done everything I have asked of her and more. She has taught me much, and carried me safely through some difficult situations.

A year ago I wrote that had I unlimited funds, I could not think of a boat that would suit me better. Now my needs have changed, and for my own fulfillment I want to build a boat of my own design. And so I must sell 'YIN YANG', I will miss her. Good luck to you all.

A book I found useful was 'Self-steering without a windvane' by Lee Woas, published by Adlard Coles.

John is planning to build a 70' flat bottom dory-style steel monohull for a bulk cargo sail trading ship. An enormous task, but knowing John's competence he will succeed with a slight assistance of the good wishes of all the P.C.A. members.

(For further ideas on self-steering methods, see Glen Tieman's article – also in this issue – describing his voyage from Mexico to Hawaii on his TIKIROA 'PEREGRINE'. – Ed.)

Tiller Self-Steering

by Thomas Firth Jones

According to our log, Carol and I spent twelve days in Gibraltar in October, 1979, waiting for our QME vane gear to come. It never did, because the manufacturer in England was waiting for the certified check to clear before he sent it. Probably that was just as well: we lost our $300 (QME never refunded our money), but at least we were not saddled with a vane gear which, according to everyone who has used one, only works in ideal conditions.

More expensive gears (Aries, Hasler, etc.) work in a much wider range of wind speeds, sea states, and points of sail. But they cost one-third to one-half of what it cost to build 'VIREO', our modified TANENUI. They require maintenance *("I grease it every day, only three points.")*, or a stockroom of spare parts *("I carry half a dozen blades.")*. And often they just break, and can't be fixed at sea, unless you happen to carry a stainless steel welding set, a small forge, etc.

We wanted a vane gear for 'VIREO' because we were preparing for a Trade Wind crossing to Barbados, and didn't fancy three or four weeks at the helm in what was likely to be big seas for such a small boat. We left Gibraltar without it because, on 16th October, we had what the weather office thought might be the last easterly of the year, and it was just too good a chance to escape through these straits, with their perpetual westerly current. We were desperate to be away from the oil and grime of the Destroyer Pens, and to work south to a warm climate.

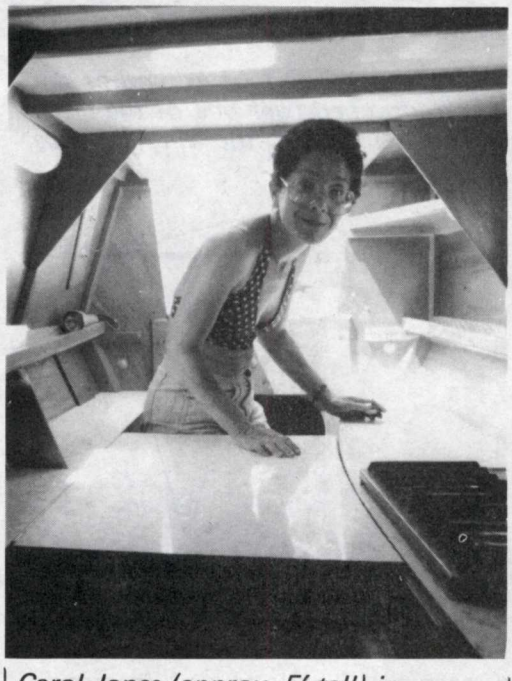
The easterly grew menacing at dusk, so we anchored in a deserted cove on the Spanish shore, marvelling at the grassy hillsides and the clean, clear water. In the morning the easterly was still blowing, and we were past Tarifa by 0900 and into open ocean. By mid-afternoon we were well reefed, but clear of shipping, with the wind astern. Steering was becoming tiresome, and I tried and threw away the imitation QME that I had been killing time by building in Gibraltar. It worked like the original, and even less well.

The rest of the afternoon, while Carol steered and the gale built, I worked at self-steering systems, with little hope of success. Self-steering downwind is something we had vainly sought for four years on our first catamaran TWO RABBITS (A HINEMOA) and now for two years on VIREO. Downwind twins, with 45^0 dihedral, do not work unless the luffs can be kept very tight and the sails flat. This required much gear and even (oh horrors!) winches. Downwind twins with sheets to tillers does not have to be so taut, but requires even more gear. In addition, the resultant sail area is inevitably small, so downwind twins are suitable only for strong conditions.

In a catamaran, a neutral helm downwind is easily achieved. The squaresail on TWO RABBITS left the helm light as a feather, but it couldn't be lashed for more than a minute or two, or the boat would wander off one way or the other. Once 30^0 off dead downwind either way, the sail would start to foil powerfully. The boat would then head up much more rapidly. The same was true of the working jib that we now had tacked to one of VIREO's bows and set square across the boat, without mainsail. The helm was wonderfully neutral, but you had to go on steering it.

I had tried "steering sails". These are small sails, like storm jibs, set up on a backstay or shroud with two sheets led to the tillers. On course, the steering sail should luff. Off course, it should fill, pull one sheet, and bring the boat back to course. But who wants to listen to a flogging sail; especially in reefed conditions? And by the time the steering sail fills and pulls the sheet, the driving sail is usually foiling, and pulling much more forcefully up into the wind.

But that evening, one day out of Gibraltar, I discovered the system that we used right across the Trades, never steering except when changing headsails. I set the storm trisail and boomed it flat. Two sheets from the boom ran to the gunnels, and thence to the tillers. The steering sail did not *tack*; it *jibed*. This meant that it never flogged, and was always pulling to steer the boat in one direction or the other. It seems that the resulting course would be very tortuous, but in practice it does not vary much more than 10^0 either side, which results in a very small increase in distance. The system is very positive, and works in a wide variety of wind strengths and sea states, as long as driving sails can prudently be carried. On that day out of Gibraltar, this was only four hours, and then we were running off with storm jib sheeted flat amidships, while the gale howled. Never mind, the principle was discovered.



Carol Jones (approx. 5' tall) in VIREO's galley

We do find that in very light going, with a very large headsail, it's better to enlarge the vane area by using the double-reefed main instead of the trisail. By swinging the boom and adjusting the sheets — especially by clipping a snatch block to one shroud and leading a sheet through that — the system can be made to work with the wind on the quarter. But its usefulness is limited to when the driving sail is being pushed by the wind. When the driving sail is foiling, a more powerful system is needed.

John Letcher's book, *Self Steering for Sailing Craft,* is more thorough and helpful about sheet-to-tiller gears than the AYRS book. For a broad reach, says Letcher, the headsail sheet is taken to the windward gunnel, and thence to the tiller. It is balanced by shock cord or surgical tubing to the leeward gunnel. I find that to work properly and stay in adjustment, the shock cord must have a rope tail. The shock cord pulls the helm to leeward, and the boat heads up. The headsail foils more and more powerfully, pulling the helm to windward, and taking her back off the wind. In practice, this system also results in very little wandering — not more than 10^0 each side — and goes on working through a large range of wind speeds.

With the wind forward of the beam, the standard system is to sheet the jib in hard, ease out the main, and lash the tiller. But this means that neither sail is drawing well, and you're probably making as much leeway as headway. Letcher recommends setting jib and main for greatest speed, running a shock cord to the leeward gunnel and the main sheet to the windward gunnel and thence to the tiller. But the main sheet bitter end is not used. Rather, it is cleated off and a line is tied around one of the parts of the sheet (say, a part running from a block on deck to a block on the boom). This line is pulled until that part of the sheet stands away from the other parts, perhaps half the distance that the part is long. The line then runs to the gunnel and tiller.

This is more sensitive to changes in wind speed than the reaching and running systems. Still, we see self-steering as a relative thing, and are much happier fooling with the system every half hour than steering manually right around the clock. We do prefer absolute self-steering, but apart from the expense, maintenance, and breakdowns of a manufactured vane gear, we are not eager to depend on one. We built the boat, and we can fix nearly anything that goes wrong with it, even at sea. As far as possible, we want the gear to be that way too.

Self-steering on a beam reach is a puzzler for Letcher, and it puzzles us no less. He suggests reefing various sails, sheeting in one and letting the other luff, etc. We'd rather change course until we can get some system to work, because you reach your destination faster by a longer route than you do by luffing and lollygagging around. However, if another Polycatista has a system for beam wind self-steering, I'd be very grateful to hear about it.

Welcome Aboard

Jonathan Beard
born November 1984
sailing on his father's (Andrew Beard, P.C.A. treasurer) AREOI 'AUDIAMO'.

Clement Poirier
born 6th November 1984
has already got his own boat, built by his father Jean Yves, J.W.D. agent, France, and builder of TANENUI 'QUESTION d' EQUILIBRE'.

The cradle boat was pictured in 'Wooden Boat' Magazine, Sept/Oct 1985, page 15, and built to a design in Issue no. 63 of same.

Jamie Wharram
born 1st July 1985
taking his first breath after surfacing into the world. A good wet start to a sea going future.

Also arrived in the last year:

Nicholas Briggs, September '84, son of Michael and Beverly (Michael and his father James are well known to Sailorman readers). We hope the 3rd generation Briggs will turn out as good a sailor as the two before.

Jessica Bumpus, 22 July 1985, daughter of Richard and Maggie. Could she follow in her fathers foot-steps . . . a future editor of Sea People!

Racing

Race Reports

Commentry by James Wharram

The racing section of this issue is a mixed bag. We have positive news of an AREOI racing in Australia, with a top speed of 16 knots; tuning a RAKA for racing around the Isle of Man; a note from our French agent, Jean-Yves Poirier, about a TANENUI racing; a long letter from Richard and Lilian Woods, who demand that it must be published "or else"! and a report from the I.M.M.C.A. (International Micro Multihull Class Association), which gives a more balanced view on the racing future of trailer/sailer multihulls.

AREOI racing in Australia

Rob Ayliffe, the first Aussie to launch an AREOI (PAHI 31) on 31.12.84, it's summer there, writes:

I'm very pleased with 'PAPER MOON'. She proves to be easy to sail, very strong, and a top speed (so far) of 16 knots, reaching, with a beam sea. All of us who sail her believe another 4 knots lurk up her sleeve, in the right conditions.

Rob also notes that he was particularly impressed with the way the 'manu' (or wave breaking stick) incorporated into the AREOI's bow, handled the heavy seas found off the South Australian coast. (See Sea People/ Sailorman No. 1 p. 26).

Rob built 'PAPER MOON' using the W.E.S.T. system, and has since opened up a small chandlery which specialises in this system, and offers good prices to the amateur builder. He has also been racing his boat, and recently came in second in Division One of the Myles Pearce/Channel 10 Multihull Marathon. This race promises to become a leading multihull event on the Australian calendar, and attracts top competitors, so this was an excellent result.

Robert Ayliffe's AREOI 'PAPER MOON'.

TANENUI racing in France

In some way, an account of an even more excellent result of a Wharram TANENUI racing has come in from France:

The TANENUI that raced at the 'Trophee des Multicoques" was called 'DOMAINE MARTIN DE GRANGE NEUVE' (sponsor's name) and the crew were handicapped people. In the second group they were third, and realised the best average speeds of 5.06, 10.71 and 12.91 knots with a force 6 breeze, which is better than a 40' 'LOUISIANA!'.

RAKA racing in Isle of Man

I like the kind of racing generally based on the Portsmouth yardstick system or some mutual agreement in the bar, which enables many people to enjoy a taste of racing which leads them to think about how they could improve their sailing abilities and their boats. An example is the following article by Malcolm Cookson:

I don't feel qualified to write at very great length about my RAKA 'Tukanooz' since I haven't sailed vast distances or even fully developed the boat.

She is number 28 and I built her between 1975 and 1979, mostly single handed at a steady plod. She is more or less standard except for:—

a. centralised mast (with centre cross beam)

b. *small* cockpit amidships for helmsman + 1

c. wheel steering and cuddy to go with (b)

d. hollow extra beam for mainsail sheet track

e. slatted walkways round outboard and to fore end

Sailing has so far been confined to local cruising and Club racing with trips to the Isle of Man and participation in the Annual Round Isle of Man Race.

However, we have experienced some extremely rough trips to and round the Isle of Man. I mean up to Force 8; on one very memorable occasion on the nose.

My abiding impression is that the boat is very safe. Thankyou. The short steep seas of the Irish Sea are a particularly severe test of multihull stability and I endorse all the Wharram safety features for the reasons already documented by others. It is one thing to read about these matters but even a few hours exposed to the real thing is a very sobering experience.

I would however like to make my own comments on the V hulls since these are such a fundamental feature of the design.

These provide the boat with a progressive response to worsening condtions even in those nail biting moments before sail is reduced. 'Great!'.

Happily these hulls, because of narrow W.L. beam, also provide easily attained speed in moderate and fresh conditions, particularly when reaching. For the same reason polycats make good motor boats, in our case 6 knots is achieved from an old 12 hp outboard.

A good close hauled performance is more difficult, but not impossible, to achieve. Pitching is a nuisance when sailing close hauled unless the boat is driven hard and speed maintained. I find that by keeping everything up i.e. 250 square foot main, 110 staysail, 390 genoa in winds force 3 to 5, and paying close attention to sail setting, close hauled performance is good by any standard. The boat heels a bit, but not dangerously, and the lee hull provides a sufficiently firm grip on the water.

Stronger winds require close attention to having the right combination of headsails and, above the bottom of force 6, reefed mainsail area, but the same rules apply. 'Tukanooz' will still go upwind well in winds gusting force 8 but in these conditions survival is, of course, more important than sailing efficiency and having done it once I am not, you will appreciate, keen to make a habit of the experience. When things are going well we achieve 90^0 between tacks and in no circumstances try to point higher than that. Maintaining speed is vital.

Light weather sailing would require a lot more sail area than we currently possess to give the boat the same relative sparkle as in fresh conditions. The deep V hulls are literally a drag at low speeds.

My feeling is that a genoa of about 750 square feet would get the boat moving close hauled in light conditions. I would take this step before deciding whether a

dagger board was necessary: boards add to wetted area. Setting such a sail would be a problem without a considerably taller rig. I notice that the early CSK cats with deep assymetrical hulls sported bow sprits of about 6' (e.g. 'Aikane'). A genoa could be tacked down to this and the clew taken right aft. The sail would need a window to assist the helmsman to see where he was going. Such a sail would also do well reaching and running. The overlapping of the main when close hauled would not matter too much since heavy mainsails don't set too well anyway when close hauled in light airs.

All one needs is money. I am sure that the cheaper aids to light weather performance by way of streamlining the rudder/skeg areas and smooth hulls are a big help and this is in hand. It would also seem important that polycats should be kept light in weight.

To sum up, V hulls work best when the boat is kept moving, preferably above 4 knots.

If it isn't already plain I would like to confirm that we can drive 'Tukanooz' very hard to windward without ill effect to the boat. The cross beams were beefed up in construction and the beam bolts are held down with brackets bolted to the hull sides.

Our racing performances have been mixed. Sometimes very good, even close hauled, sometimes average, for the reasons implied in the above remarks.

Confidentially, I prefer sailing in moderate winds and warm sunshine and not agonising too much over sailing efficiency. I'm sane, would you believe.

Nevertheless, it's good to get the best out of the boat provided it doesn't cost an arm and a leg.

On the accommodation front I wouldn't change the hulls – the bulwarks provide good sitting areas on deck and to raise the decks would be adverse. In harbour a good deck tent would obviously be the thing but what about a deck saloon which dismantles into fairly small sections?

This article from Malcolm Cookson on the tuning of the RAKA, confirms the confusion that can arise about windward abilities. Unless a boat has first class sails and is carefully tuned/sailed, there can be a wide variation in performance, i.e. sailing close to the wind at speed. This variable, as shown in the report by the Canadian, Harry Ellis, on his RAKA (Sea People/Sailorman No. 3, p.16), can be evened out by the addition of daggerboards. The daggerboards on Rob Ayliffe's PAHI 31 are probably the reason why he is doing so well in racing. It does seem that, if you want to get ahead, use a daggerboard. On the other hand, for easy building, standard cruising, they are a nuisance.

MICRO MULTIHULL CONTROVERSIES

Part of the multihull world which has been in particular ferment over racing during the last few years are the Trailer/Sailer Multihulls. In the last issue of the 'Sea People/Sailorman' I tried to give a balanced evaluation on various approaches to racing; the Portsmouth yardstick system, One Design racing and Rating Rule racing. These were not idiosyncratic Wharram ideas, but widely held opinions throughout the world of yachting; a perennial subject of discussion and elegant argument.

Richards Woods, the Secretary of the MOCRA (Multihull Offshore Cruising and Racing Association) Micro Multihull Racing Committee, has been, for the last three years, advancing in various ways this elliptical argument:

1. **All modern trailer/sailers are micro multihulls**
2. **All Micro Multihulls race**
3. **If a Micro Multihull does not race or get a good placing in a race, it lacks in design.**

There are a lot of ifs and buts to this argument to which I have, for the benefit of our catamarans, drawn attention to.

However, what I have been writing is now the opinion of many other trailer/sailer multihull designers, other multihull/trailer/sailer owners and the official opinion of Alan Veth, the Secretary of I.M.M.C.A. (International Micro Multihull Class Association).

This year, he visited the Micro Multihull races held in Brighton, then went to Bandholm, Denmark, where Micro Multihull races were held as part of a general multihull meeting.

Alan Veth
I.M.M.C.A. Newsletter No. 2.
(Extracts)

MICRO MULTIHULL EVENTS this summer:

Let me tell you first what impression I got from the few micro-multihull-races that took place since June:

Brighton, U.K.:

Together with Alexander Verheaus I went to Brighton to the 'MOCRA-worlds', to see how the micros race over there and what their owners think. Compared to several World and European Championships I sailed in, and helped to organize, for Tornados and Javelins, the event at Brighton did not really deserve the title of "World Championship" . . .

The only race we witnessed (Tuesday morning) showed a big difference in performance between the fast boats: Dragonflies and Gwahir and the slower ones: Scamper, Trivia and others, which is confirmed by the overall result. **I also got the impression that racing on these faster micros is not suitable for families with young children. An opinion that I found confirmed by the races at Bandholm . . .**

Bandholm, Denmark

It was a very spectacular sight to see near to one hundred multihulls in the rectangular port of the small town of Bandholm on Lolland. I thought I could count some 14 Micros, of which 10 actually entered in the North European Championships . . .

Two divisions?

After describing the races in some detail, Veth comes to the following conclusions:

We have to realize that a division in 2 different classes is necessary.

In spite of what is written elsewhere we have to accept that racing multihulls are different animals than the cruising ones.

People that want to race want speed in the first place. They don't care about a toilet, cooker or such facilities. They sleep on their boats because it is handy, although even at Brighton, where there were more cruising types some crews preferred to sleep on shore.

Light-weight is all important, and the racers are stripped of all cruising gear before the start. And really isn't that what racing is all about? The sensation of speed, trying to out-perform the other competitors. Who wants unnecessary ballast? If I look at the attitudes at Bandholm and in a smaller way at Brighton, **micro-multihull racing has gone a way of its own.**

Then we have the much larger group of cruising sailors who may or may not want to join in an occasional regatta or rally. For them speed is less important if it means forfeiting cruising utensils, such as cushions galley-equipment, food-supplies, water etc. These people tend to look for wider-bodied hulls, with more height and sheltered seating positions. But most important of all, the sheer speed of the racers and the stinging spray frightens the cruising people away from the thoroughbreds towards tamer multihulls.

I do not have sufficient details of all the boats that raced at Brighton, but it would seem that the fast Micros all had Bruce-numbers higher than 1.6 (6.35 metric) and the slower ones remained under 1.6.

I would therefore suggest, and this opinion is supported by others, that we define Micro-multihulls as the fast, trailerable cats and tris, designed particularly for racing, but within the spirit of the class as proposed by Richard Woods and the Mocra

in 1983, with a Bruce-number between 1.6 and 2.0 (6.35 and 7.95). All the other trailerable multihulls with weekend-accommodation and a Bruce-number under 1.6 could be called: CAMPER-MULTIHULLS.

The more exhilarating micros are also the more vulnerable and dangerous craft expecially in the hands of inexperienced crews. It is for these multihulls that rules are necessary to control racing.

Boats that are meant for cruising and camping in the first place have no need for class-rules or even a class-association. When they meet, they'll join in Bar-B-Que parties and rallies and their owners do wise to become members of national multihull clubs. If they want to race with the faster Micros they should also comply with the Micro-Class rules, but ideally, they should start separately some 30% of the expected E.T. before the micros, or sail a 30% shorter course, to reduce the "out-time" of the finish-vessel.

Again in my opinion it is unwise to mix the two really different types of performers under one class-rule, which is aimed at one or the other group.

Epilogue

I readily admit, that even in Micro multihull circles not everyone will be happy with what I said before. This is often the case, when insufficient careful thought has gone into the evaluation of certain developments. There are dreams, ideas and realities. What I write is based on what I have seen and heard. Even my wishes may be different but international agreement is only possible if we accept the difference in attitude between a racing and a cruising helmsman.

Problems between Richard Woods and James Wharram, as fought out in the columns of the 'Seapeople/Sailorman' are the result of misunderstandings between racing and cruising opinions, **confused further by the fact that Richard still tries to combine racing and cruising characteristics in one type of multihull. There is a definite difference between the racing crew, that spends a night in their racing bunks and the cruising family that lives aboard for a longer period,** even if the latter may sail an occasional race **Micro-multihull promotion has confused the issue in the past, because it made no difference between the two groups.** *(Who is responsible for this? — J.W.).* If I am wrong, no doubt you will tell me! But then I think that international micro-multihull racing has yet many battles to fight.

Alan Veth

It is extremely gratifying to see that Alan Veth, secretary of I.M.M.C.A., along with the majority of European trailer/sailer multihull designers and sailors are coming into agreement (separate communication) with what has been written on trailer/sailer micro multihull racing in this column since its inception. **It would seem that 'we' are not the minority but just the early voice of the majority.**

Richard Woods
Reply to Sea People/Sailorman No. 4, Racing.

I ended the 'Racing' column in the last issue of the 'Sea People/Sailorman' with the paragraph:

"If the MOCRA Micro Multihull Committee are at last *openly* prepared to admit their move towards stability, and stop the dangerous and misleading writings talk, like: **"Micro Multihulls = constant speeds of 15 knots, coastal cruising for young families".** *(according to their last Micro Multihull press release),* the 300 plus Coastal Trekkers with a Bruce Number of 1.6 are open to friendly approaches from them."

to which Richard Woods, the secretary of the 'British' MOCRA Micro Multihull Sub-Committee, aided by his wife replied:

"

For obvious reasons we are no longer members of the PCA, but equally obviously we try and read the Sailorman/Sea People whenever possible. Although not members we feel that we have the right to reply to James Wharram's racing article in the latest issue. Apparently the last letter we wrote was published because it had also been sent to some PCA committee members. We hope that this reply will also be published as, once again, we are sending it to committee members and some other readers.

James' article on Micro-multihulls contained so many errors that we feel that they may have been made deliberately. For example, he knows that on 25th February, 1983 we wrote a letter to him which contained the phrase "what I am writing for mainly is to get your views on Micro-multihulls". Ruth Wharram replied on 2nd March, 1983 saying "I have just received your letter . . . James and Hanneke are away . . .". We are still waiting for James' reply. He knows that the Strider design is not just "a few months old". The Strider was originally drawn in the spring of 1982, with the plans finalized later that summer. The first Strider was launched in the spring of 1983 (and it was featured in Multihull International). In other words, not only was the first Strider sailing before the first Gwahir, but we think the Strider plans were finished before the TIKI 21 plans.

R. Woods has clearly mis-read the paragraph in the last issue of the 'Sea People/Sailorman' p. 22, particularly the sentence: "R. Woods has brought out a new version *of his 25' Micro Multihull trailer/sailer called the 'Strider'".*

The operative words are 'new version', *i.e. the new commercially built fibreglass 'Strider' which — according to R. Woods' published figures — has a heavier hull weight and a 1 ft. wider O.A. beam than the original wood and epoxy 'Strider'. This means the new fibreglass version is a more stable boat.*

The TIKI 21 plans, as is well known, were originally published as a prize winning design in 'Cruising World', November 1982. To enter this competition, the plans were in the 'Cruising World' office already six months before, the examination. — J.W.

He knows his comments on multihull insurance are not true. We wrote in Multihull International some time ago that we had no trouble insuring our Gwahir by paying the same 1% premium as monohulls with a company that will not insure any Wharram. He knows that 10 members of the MOCRA Sub-Committee were involved in deciding on the Micro Rules, and that we tried hard to get an input from all interested parties. The final outcome was definitely not just our ideas (had they been, boats would have been easier to sail and trail, more stable and significantly cheaper). He knows that we did not write the Micro Press Release — that was done by Stuart Fisher, MOCRA's press officer (his name — not ours — appears on all press releases).

As Secretary of the MOCRA Micro Multihull Racing Committee, R. Woods should pay more attention to what his press officer (Stuart Fisher) is doing, because the press release had photos and drawings of the 'Strider' all over it, but none of any other designer. I, like all other irritated parties, assumed it was done with the full knowledge of R. Woods. — J.W.

Despite what James implies, his racing experience is far more limited than ours, as we have been racing dinghies, monohulls and multihulls for 25 years. We would, however, agree that at only half James' age our experience in life is less than his. Even so, we realize that a large number of people are ambitious and aggressive and want to "beat their peer group". Some want to be chairman of the local WI, others Prime Minister, still others want to sell more multihull designs than anyone else. Another large group take out their natural aggression in sporting combat, e.g. sailboat racing. Apart from the fact that this latter group causes less problems in the world, we strongly disagree with James' comment that one only races to win. Richard's father has been racing dinghies for 30 years, and has never won a race (in fact he is usually last), but that does not interfere with his enjoyment. We race so we learn to sail our boats as best we can.

English readers will know that the Micro-Multihull World Championships

Maurice Killen 'SASSI 3' in Brighton Races

Poor Maurice Killen (see his cruising article in 'Sea People/Sailorman' No. 4 p. 18) got clobbered in the Brighton Micro Multihull races. Here is, what he wrote to us after the racing:

"

Regarding the racing, most competitors had improved rigs and sail areas. I could not use my new Genoa as it is a light weather sail and conditions during that particular week would have blown it out.

SASSI 3 **was the smallest boat in the competition** and without boards or keel her windward performance did not match the others. Indeed this was made worse by the fact that I had reduced the sheeting angle on the Jib to between 8 and 10 degrees by using the side of the centre deck as a sheeting point. Strengthened underneath obviously. As further experiments in the Med this year have shown this is a mistake. The boat points higher but she doesn't go anywhere, boat speed suffers and leeway increases considerably. In addition as the wind strength increases the lee bow is forced deeper and deeper. "

Maurice Killen is not making excuses when he describes his TIKI 21 as much smaller than any other boat in the races. The waterline length of his boat is 18 ft. 6in.; that of the 'GWAHIR' is 22ft. 6in. – i.e. 20% longer, with a probably 50% *greater volume, which equals a greater punch through the seas.*

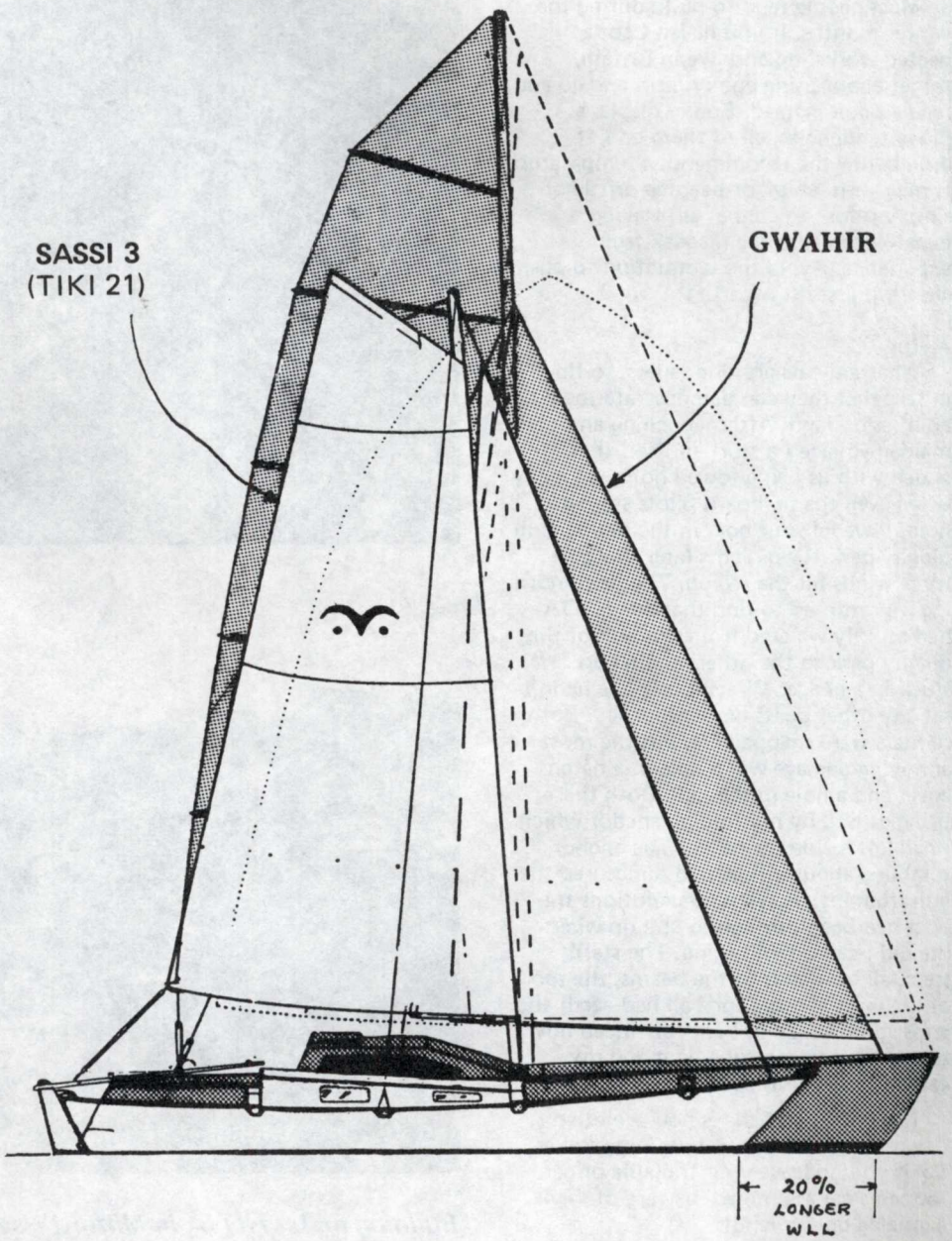
were held in the worst mid-summer weather for 20 years. Even so, out of 20 original entries 17 made it to the start line, including the TIKI 21 sailed by Paul Wells and Maurice Killen. The first race was held in a F5, along the coast, never more than 2 miles from shore. The TIKI retired while trailing the fleet before the first mark, because the crew said it was "too rough" and "the boat was not designed for these conditions" (i.e. coastal sailing in mid-summer!). They did not race again. In comparison, the "unsafe, dangerous" boats like the Dragonfly with a 42 foot mast and Gwahir completed every race. Fast boats need not be unstable or dangerous. In fact a dangerous boat is not just an unstable one, boats are also dangerous if they are so wet to sail that the crew have to stop sailing when the wind gets up; they are dangerous if they cannot manoeuvre easily (e.g. if they cannot tack in all conditions under mainsail or genoa alone); they are dangerous if they cannot be easily reefed in seconds etc. Multihulls that are seen to be unhandy boats that will not go to windward when it is rough reduce overall multihull sales as much as the fear of capsizing.

We could go on pointing out the errors and misinformation in Wharram's article by showing that Gwahir's micro-stability number is 12.89, while the proposed 20% larger "racing rig" TIKI seems to be 11.08, i.e. the TIKI is more unstable; or by saying that readers interested in racing would like to know what races are held (the PCA has as far as we know not organized any races for its '500 micros', even though there has been a regular racing column in the Sea People), PCA members are invited to MOCRA events not to 'swell numbers' but to give them a chance to race if they want to . . . but it is not our magazine.

If your editor continues to write and publish misleading, damaging and often false statements about other designers **(and this letter is not published)** then we hope that you – the members – realize that the Sailorman/Sea People (and hence the PCA) is not separate from James Wharram Designs (as required by its constitution and the RYA) but that it is a J.W.D. propaganda vehicle, poorly disguised.

Richard & Lilian Woods "

One must ask the question why R. Woods has not been prepared to follow the majority suggestions regarding Micro Multihulls as expressed by myself and now A. Veth on behalf of I.M.M.C.A., in having an all out 'grand prix' Micro Multihull racing class and another class for all-round, all-purpose cruiser/camper/trailer multihulls.



Building

THOUGHTS FROM A NOVICE

by David Evershed

I started building my HITIA on September 7th, 1984, finished it in March 1985 and launched it April 1st 1985, at Mylor, Cornwall.

If you have never built a boat before and, like me, are a complete novice to the sailing game, here are three hints, that had I known them before I started, could have saved me time *and* money.

Before

If you order all your wood before you start, do not just order the *total* length as given in the plans. The wood for my 14 ft. mast arrived in 8 ft. lengths, forcing me to re-purchase 84 ft. of wood in 14 ft. lengths.

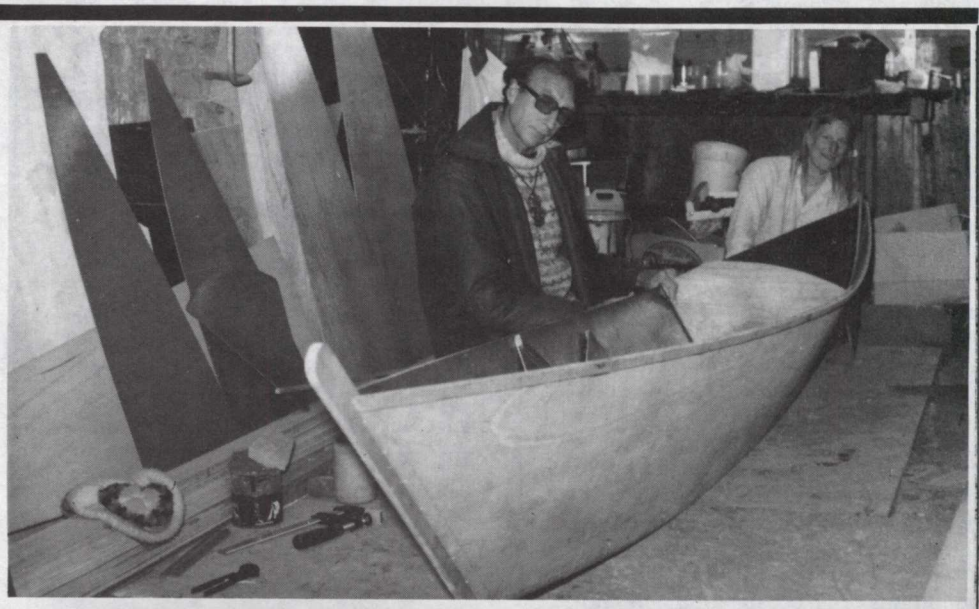
During

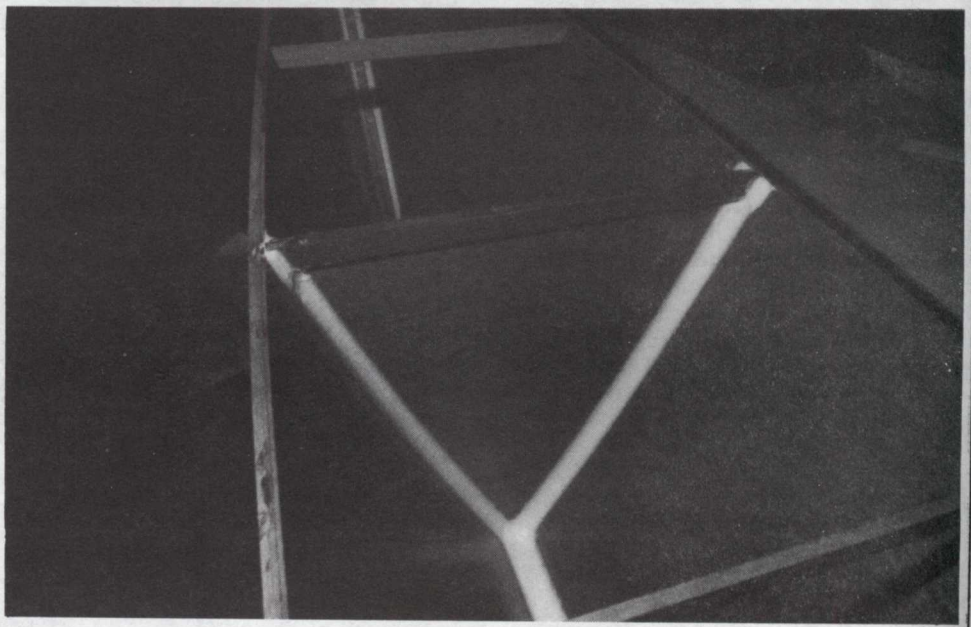
Most people tend to build during the winter months. If you haven't got a heated workshop and live in Britain, forget about using epoxy resin and go and read a book instead. Epoxy displays many tendencies, all of them bad, if used below the recommended temperature. It may turn white, or become brittle or simply refuse to cure at all. Having experienced all three, I speak from experience. Avoid the temptation to push ahead, it just isn't worth it.

After

Wharram cats are fine sailers, so fine in fact that they can demonstrate their abilities on land. After launching and our maiden voyage (a story in itself that ended with us being towed home on a day when even the sailboard pilots stayed at home), we left our boat in the sailing club dinghy park. Two nights later saw gale force winds hit the region. The next morning we returned to find that our HITIA had merrily waltzed from one end of the dinghy park to the other, ending up stuck in a hedge. Miraculously she hadn't hit any other boats on her journey. Both rudders were snapped off, but the most annoying damage was a hole in a hatch cover and a hole in the hull. Both these being caused by my folding anchor which I had left inside the hatch. The anchor, tumbling about inside, had punctured the hull from inside. What convolutions the boat had been through to end up where she did I can only imagine. The stern, stem, all four ends of the beams, the *top* of the mast and the sprit all had earth and grass stuck to them. I am convinced now that she is a very strong boat and my carpentry is not as poor as I feared.

Needless to say she is now well tied down at each corner to four large stakes. So, if you do leave your trailable or car toppable cat assembled, beware of capsizing on dry land!

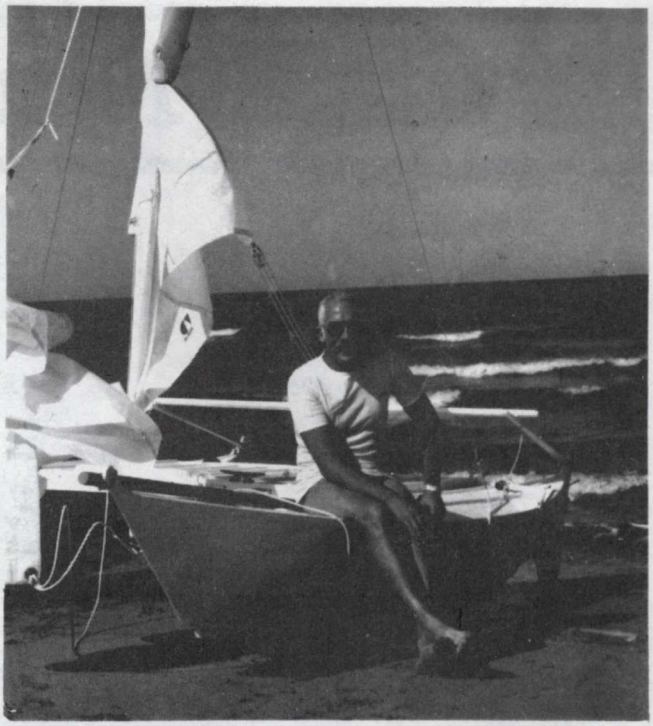




Building of 1st HITIA in Milford Haven, Wales (1981).

Hitia in Oman

by Malcolm Stuart



The climate in the Muscat area of Oman is ideal for sailing for six months of the year. Warm steady winds, clear cloudless days and the sea is nearly always calm with very occasional storms. Add to this a few islands plus a few rocky bays to visit and long sandy beaches, just about perfect.

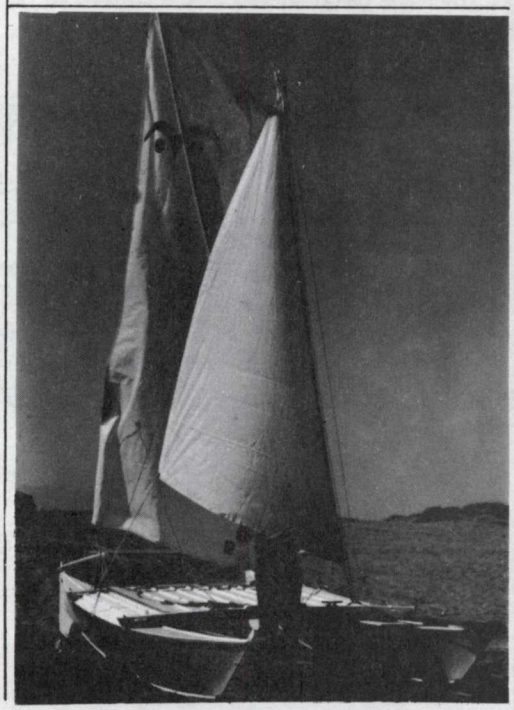
It was a minor tragedy to me not to have a boat that I could sail and take advantage of these near perfect conditions. Clearly I had to do something about it. I required a boat that was small, car toppable, could carry two and, if possible, have a nice turn of speed. Kit boats were out, I enjoy the satisfaction of doing as much of the work as possible myself. This is a family complaint shared by my two brothers Ken and Bob. Bob built a sixty four foot ferrocement ketch from scratch so I would have been a bit ashamed not to do the same with a small sailing boat.

After much searching for the right design, I turned to James Wharram Designs and purchased the plans for the seventeen foot MAUI catamaran. At this time a friend of mine, Chris Pillinger, had just completed the first home built and also the largest catamaran in Oman, a twenty one foot TIKI. He had the plans for a fourteen foot HITIA. This seemed ideal as it is designed to fit on a normal two bar car roofrack. I wrote to James Wharram explaining that I had changed my mind and why. I received a very nice reply from Ruth Wharram requesting that I return the plans for the MAUI if I was happy with the HITIA and wishing me the best of building. Reading between the lines of Ruth's letter I got the impression that two or more boats have sometimes been built from the one set of plans. This is the same as taking bread from the man's mouth and I don't agree with it. Anyhow with the best wishes from James and Ruth Wharram building commenced.

Materials in a place such as Oman can be a bit of a problem. The only 4mm ply I could find fell far short of BS 1088 but it was all that was available. Timber is readily available especially hardwood, indeed, softwood is rarely used for building here. Doors, window frames, etc. are all made of hardwood. I had to make arrangements to get W.E.S.T. epoxy from UK. This was done through Jim Beer who has since returned to UK, thanks for your help Jim. Eventually I had enough to get started.

I can only describe James Wharram's plans as an idiot's guide to boat-building. They are very good, nothing left out from cutting the wood to fitting the completed boat onto a roof rack. I cut the ply to size, all dimensions are very clean and in metric and imperial. In no time at all I was ready to glue the bits together. I won't go through this in detail as the plans are so clear you will see exactly what I mean.

I did deviate slightly from the instructions, I stiched the keel, hull sides, stem and stern and frames together before the application of the WEST epoxy. The idea behind this was that the whole lot could be coated including the joints at the same time ensuring a good wet joint, even, the fillet was applied before the epoxy 'went off'. I required help to do this as it had to be completed in one operation, this was given by Chris Pillinger and Pete Warren. They both had experience from building the TIKI 21. Listening to the pair of them was a laugh. The HITIA is a mini version of the TIKI (or vice versa) and they were taken by the similarity between both plus the ease of building the HITIA. I kept hearing remarks such as 'Its shrunk in the wash' 'Its more like a kitten than a cat' etc. The glueing process took two hours, one coat of epoxy, followed immediately by the fillet and immediately again with the second coat of epoxy. Chris and Pete's comments were 'That was easy, wheres the next one?'.



Following the plans, the rest was easy too. The beams were made of hardwood, that worried me a bit as I thought they may not flex enough. The only softwood I could find was full of knots, so hardwood it had to be.

I ordered the sails from Jeckells and collected them while I was home on holiday. The standing rigging was made here in Oman, mistake, it cost twice as much as it would have in UK. Then, it was all ready to assemble, just to see if it all came together, it did. It had taken me almost a year to build. I didn't do much during the hot humid summer months and of course I had been home for holidays. I think the HITIA could be built in 3 or 4 months putting in a few hours each evening, but you have to keep at it.

The 15th November was the launching day. Myself, Stu Warburton and Bill Forrest put the boat on the roofrack of Bill's Range Rover. This was easy, just follow the instructions. We took it to the nearest beach, assembled it in about half an hour, Stu and myself climbed aboard and we went sailing. No problems at all.

The spritsail looks really great. It is easy to trim and gives the boat a good turn of speed. We had a steady breeze blowing all day and we took full advantage of this, sailing the boat non-stop. We even did running changes. I sailed the boat into shallow water Stu jumped off Bill jumped on, all without stopping.

We took a few photographs of the event which I enclose should you want to see them. I think they show what sailing can be like here in Oman.

Thank you James Wharram, you have another satisfied customer. To anybody thinking of building the HITIA, get on with it you will enjoy it.

What's New!?

Andrew Beard, Treasurer of the P.C.A. sent us his ideas and experiences on transporting the hulls of his PAHI 31.

We have also received photographs and a drawing of boat transporters from John Nock, Florida; Martin von Jena, California and Keith Viewing, Zimbabwe.

TRANSPORTING AN AREOI
by Andrew Beard

"For months I have worried away at how to strap down a V-shaped hull on a platform lorry. I have not seen any articles or suggestions and the thought of my labours of 3½ years falling off a lorry in the middle of nowhere didn't appeal at all.

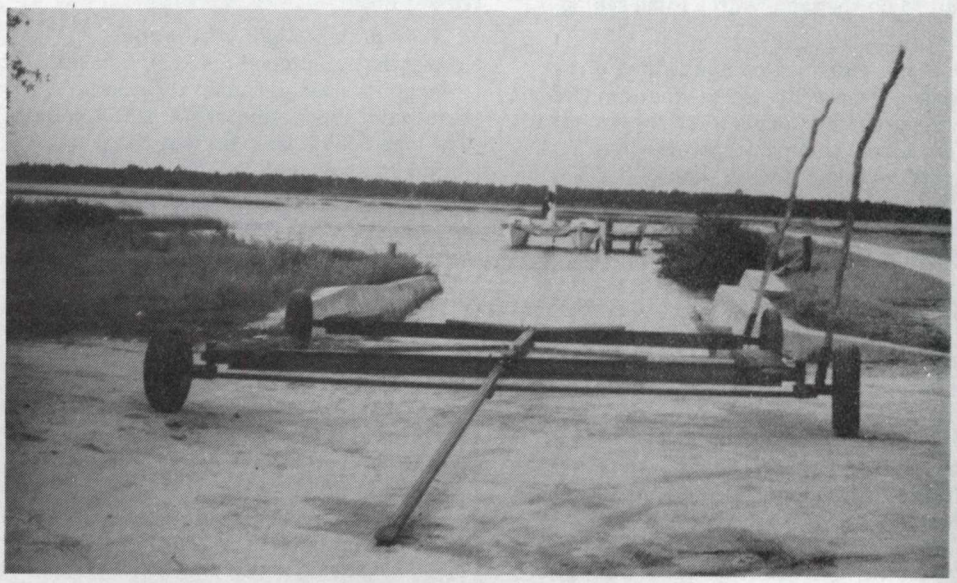
Eventually, the solution dawned and how simple it became. Assuming the lorry platform is 7'6" wide you are allowed an average of up to 1' on each side, i.e. 9'6" max. The PAHI 31 has a hull beam of 4'3", i.e. 8'6" for both hulls, so, allowing a 4" space between each hull, gives one a 4" available 'space' each side of the lorry.

Load both hulls onto the lorry, supporting them on your building cradles which are nailed to the lorry platform floor. Place a narrow strip of carpet in 2 of the beam troughs of both hulls. Then obtain two hefty battens of timber (I used 8"x 2") and lay these in each trough and bolt them in place by drilling through the batten and using the ¾ bolts for the main beams. The wood is now box section therefore unlikely to move.

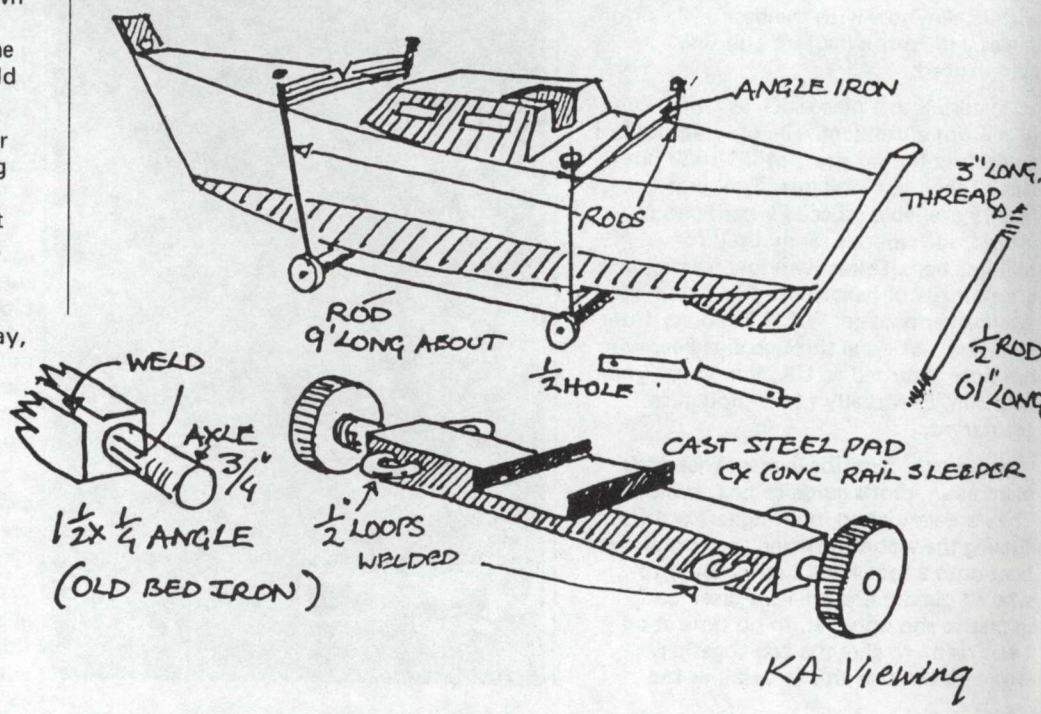
Next cut a notch say 2" in from the ends of the battens on the top edge to stop your ropes sliding and then rope her down well. All the beams, spars, cockpits, gratings etc. etc. are then loaded onto the lorry and lashed down using plenty of old carpet for padding, and away you go.

We motored 160 miles in 4 hours over some very twisty, bumpy road, including the notorious snake pass between Sheffield and Manchester. No movement of the load, no damage suffered – thank goodness!

P.S. Beware low bridges and in particular the 9'6" wide bridge in Conway, N. Wales."



SIMPLE CRADLE FOR TANGAROA



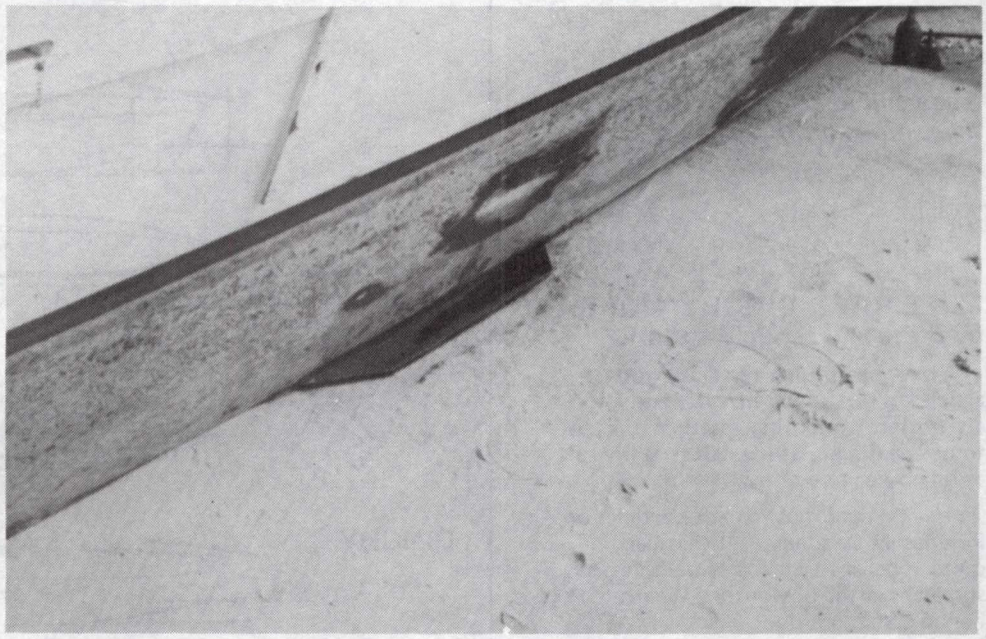
PHOTOS

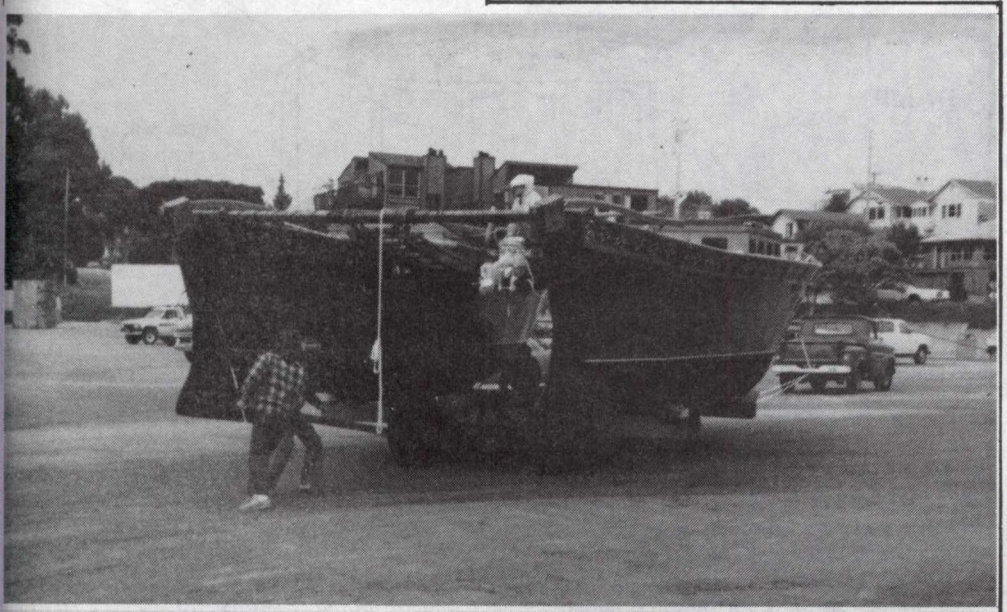
Left top & bottom:
Fullsize boat trailer built by John Nock, Florida, for launching his NARAI Mk I.

Below top & bottom:
Martin von Jena, California, also built a trailer to launch his NARAI Mk IV complete.

Note the possiblity of placing the wheels inboard or outboard of the hulls.

VORTEX GENERATORS





VORTEX GENERATORS. The photo shows a vortex generator on the TANE 'TAWHIRI' by Noel Eberhardt in Australia. As yet he has no firm conclusions about its abilities. Claus Bergsoe, owner of a TANE in Denmark, is much more positive.

He writes: I'm almost sure that you don't remember your approval of the idea, when I asked you in Stavern in '81. But in '83 I fitted one under each hull. In principle they are as AYRS recommended in June '80. Approximately 2½ft by 1 ft.

The principle being sharpened sides and aft end and a rounded nose.

Construction is from 2 layers of 7mm marine plywood (leftover from boat-building), finished and drilled on the workbench; then glued together and to the keel-plank with Araldite using 12 long s/s screws.

They work beautifully. I have no "Sparring partner" but a fair guess is a reduction in leeway of 50%.

Also they enable me to tack (in reasonable conditions, that is), under mainsail alone. This was impossible before. I think that they act as a pivot point". Still, my TANE is not as close-winded as modern '½-boats' but the effects are very good. For simplicity and ease of construction (it took one week-end, and I'm no morning bird) "Vortexes" must be better than a centre-board. And I think that it will take quite a big board to match the effects. By the way, I use the word "end-plates" in accordance with Lars Oudrup. Tim Ainley of Canada also said, the vortex generators helped him to point closer to the wind on his RAKA 'BELUGA'.

Has anyone any more information on vortex generators?

From Steve and Linda Wagstaff come these ideas on liferaft, dinghy, ramp, printed without any editorial government, to try to stimulate the readers in to comments or improved suggestions on these ideas.

"LIFE RAFT, DINGHY AND RAMP" by Steve and Linda Wagstaff.

I have been thinking about your article on safety and liferafts and am always left wondering whether it is better to have a dinghy as life raft or a life-raft as dinghy or one of each!

Having read most of your articles on Polynesian Catamarans, it has become quite apparent to me that the safest sea survival craft is obviously a Wharram Polynesian Catamaran!

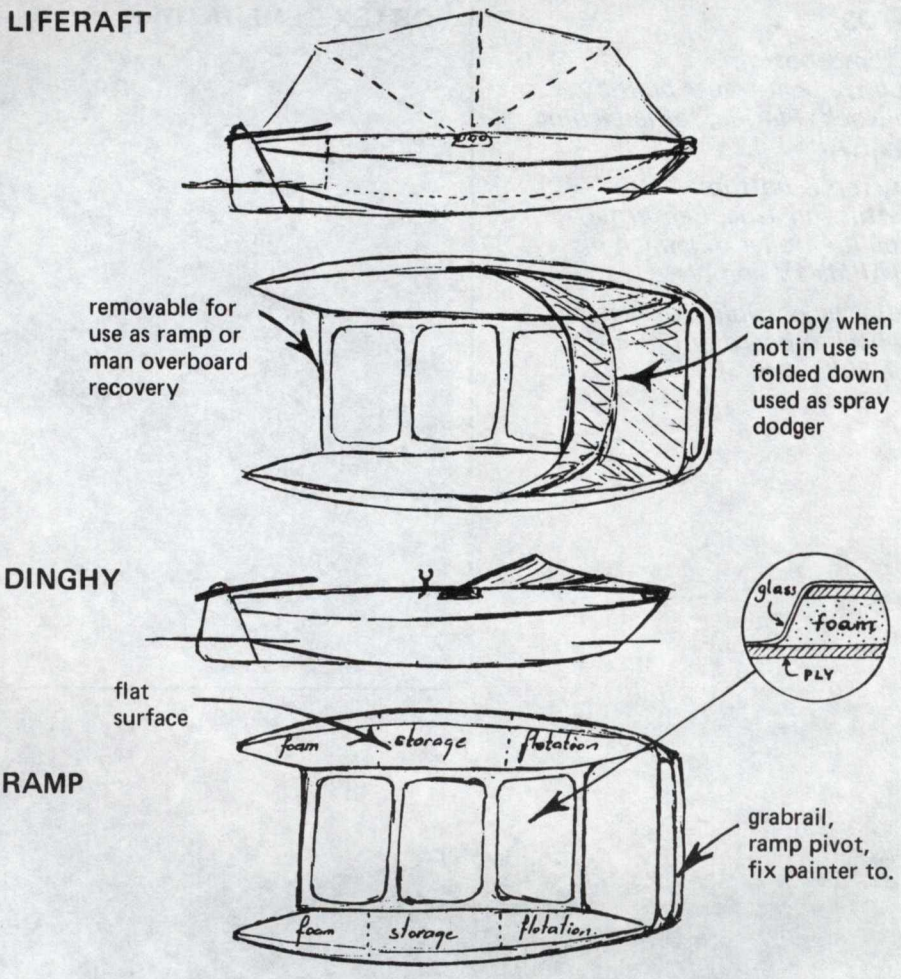
I propose scaling down a TIKI 21 to anything between 6 and 8 ft., running a rigid floor from the top of the bow between both hulls to within a foot of the transom and form a new transom between hulls, the floor dropping down some 6 in. from the bottoms of the hulls, so you will still have the effect of the hulls acting as keels and stopping the raft/dinghy/catamaran from skimming across the top of the water, also hopefully still leaving the craft sailable in emergencies.

To make her unsinkable, fill forward and aft of the hulls with foam. Also the cockpit floor would have sections of foam glassed in, leaving a 2 in. gap between the foam slabs for any water to gather and be pumped out. The middle of the hulls would be used for the storage of minimal water, emergency rations, safety and survival equipment.

A deck tent such as the one on the TIKI 21 would be always left attached to the craft acting as a spray dodger when in use as a dinghy or a protective canopy when in use as a liferaft.

The third use, if possible, would be as the newly developed deck ramp. I propose running a steel pipe along the front of the craft from one hull to the other to act as a grab rail, to fix your dinghy painter to and, thirdly, doubling as a pivot for the deck ramp. This last idea also solves the problem of stowage during a voyage. The natural hull shape of the craft being suspended 18" from the sea is an easy shape for the waves to pass by, the only problem being if a wave should carry on deck. This is a potentially dangerous situation, so why not have a removeable transom so the boarding wave can return straight back to the sea. This would also be more convenient in retrieving in a "man overboard" situation. Should the craft be needed in an emergency situation, there is ample flotation to more than render her useable without the transom.

It may also be possible, as an after thought, to use this ramp to fasten the outboard on. More thought would have to go into that idea though.



SEA SICKNESS CURE?

SEA SICKNESS is often discussed with other sailors in this office. There are many drugs which cure or alleviate seasick symptons, but they all have some kind of side effect, usually drowsiness and, invariably, they are not suitable for sailing pregnant women.

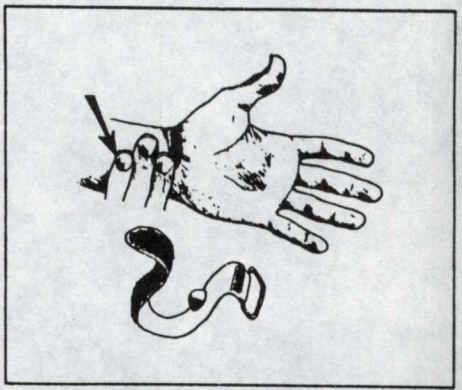
When I worked on a fishing trawler a non drug cure was a slab of greasy bacon between two slices of flabby white bread (It didn't always work).

A more successful non drug cure is acupressure. Read this report from Neila, printed in the Canadian Magazine 'Polycats':

A CURE FOR SEASICKNESS by Neila:

I have always suffered from motion sickness and it has always been a worry to me that I would not adjust to boat living due to this infirmity. We had read of the use of acupressure to minimize the effects of seasickness and I was very anxious to see how well it would work because drugs make me very sleepy. Well, I'm very happy to report that acupressure worked beyond my fondest hopes. From the very first day, I could put my head down in the bilges, smell kerosene and gasoline, experience motion down below punching to windward in 25-30 knots wind and was not once in the least bit queasy in the entire two weeks. What a relief! Here's how it works. Acupressure is the knowledge of where the nerve pressure points are in the body. By pressing on the right point you can relieve the pain and in this case nausea. The spots to push on are located on the inside of each wrist approximately 3 fingers' width above the junction of the hand to wrist joint and central between the main rope-like tendons. If you press in the area, you will locate a spot where it feels slightly sore or tender and that's it. I took a pair of tennis wristlets and sewed 2 rounded but slightly pointed buttons on and they worked really well. Hurray!

A firm in Britain, called Acuband Ltd. (Suite 1B, Market Centre, Western International Market, Hayes Road, Southall, Middlesex UB2 5XJ, U.K.), is selling a set of two (both wrists) for about £6.00. These are made of Velcro with a silicon bead glued on the inside. You can either make your own or buy a set.



Correct positioning of the bead is essential. To find the exact pressure point place the inner three fingers in a line with the top crease of the wrist. The point of the index finger is the right position. Put on the strap and press the bead firmly into place, now adjust the strap so that it is comfortable but not slack. Straps should be worn on both hands, but if only one strap is worn then this should be on the right hand

CABIN HEATERS

There are many people that claim trying to live aboard a Wharram in the North European winter is to be approached with horror. I/we have lived on Wharrams from the 23ft TANGAROA to the 51 ft TEHINI. It is a question of how you live and adapt; that is the difference between comfort and discomfort.

Paraffin wick heaters are warm, but create moisture vapour. If the paraffin heater has a chimney, the moisture vapour and fumes can be vented directly out of the cabin. John Shores on his TEHINI 'YIN YANG' had a small woodburning stove – so has John Bellenger on his ORO 'PYXIS' (see photo).

This 'Practical Boat Owner' article gives basic information on how to make your own stove. It is very similar to an American design recently published in 'BoatBuilder', Vol. 3 No. 5 p.18, called the Steve Stove. The address of the magazine is: P.O. Box 1109, West Palm Beach, Fl. 33402, U.S.A.

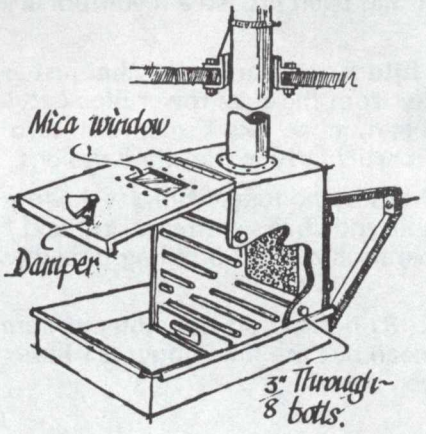
The following idea is borrowed, stolen, copied directly from the 'Practical Boat Owner', July 1968:

First find your box

Coal fires on boats. Still the sighs come from those who can't get a small enough, light enough fire which will burn any solid fuel that comes handy. Two years ago I wrote an article on how to make one for yourself, but it was rejected by two yachting journals, so I concluded that I was mistaken—obviously there could be no problem and other people could buy just the right fire, somewhere, somehow. So I threw the rejected pages to a herring-gull. Now the shivers and sighs of chilly yachtsmen are apparent in your published discussions, so if they will take advice from a mere female, this is my solution:

1 Acquire a heavy metal box—an army ammunition box, battery case, etc, which can be bought from surplus equipment stores. Mine was 15 inches high, 8 inches wide and 7 inches deep when stood up as in figure 1 and cost 4 shillings. It is 14 or 16 gauge mild steel, with a hasp fastener.

2 Take it to the workshop and cut some holes. **A** for a mica window to fit. Bolt it in with a metal strip inside



and a couple of asbestos gaskets from a cooking mat either side of the mica. **B** is a hole for draught, the shape of a slice of cake. Cut copper or brass sheet a little bigger than the piece taken out and bolt through at the apex with a nice big wing nut. This will polish up and look pretty and adjust your air to a nicety. **C** the chimney hole. If a round metal flange is available it makes the best joint with a stove pipe. If not, one can get away with bending up the metal in segments, doing the same thing in reverse with the pipe, and bolting the lot together with cement used for car silencers. About 2½-inch pipe is the right size. Last, fourth lot of holes **D** are for the fire bars, ⅜-inch bolts do well.

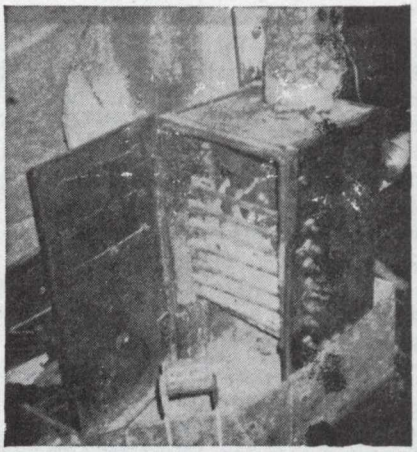
3 Find some firebricks to line the back and sides; they can be cut to size with a hacksaw, but must cover all the box in direct contact with hot coals.

4 The ash pan, not essential, but does save mess in cabin. Adapt baking tin, or make one from galvanised sheet.

5 The fender. This must be really deep and also allow the stove door to open.

Now the installation. The fire is bolted through the bottom of the box and floorboard, and has a couple of brackets holding the chimney which goes through the forehatch (to avoid damaging fibreglass decks). It could be taken out in a few minutes in summer. The pipe is the only really dangerous part—it must have a guard or one can be thrown against it and be burnt.

This particular fire has been in my Audacity sloop for three years now, and has burnt night and day through two winters without any signs of deterioration. Only the galvanised stove pipe has been renewed. It is safe to leave on when under way, or when leaving the boat, as the door is closed and hasp secured. Like this it is impossible for



cinders to fall out or the ship to catch fire. It burns best on smokeless fuel, Rexco, at about 18 shillings a hundredweight, but will take wood, coal or, in a breeze, harder fuels such as Anthracite It is best lit with Whiz white firelighters (unaffected by bilge water) and will stay in about 6½ to 7 hours. Weight empty is about 13 pounds (as against 80 to 100 for caravan-type coal fires).

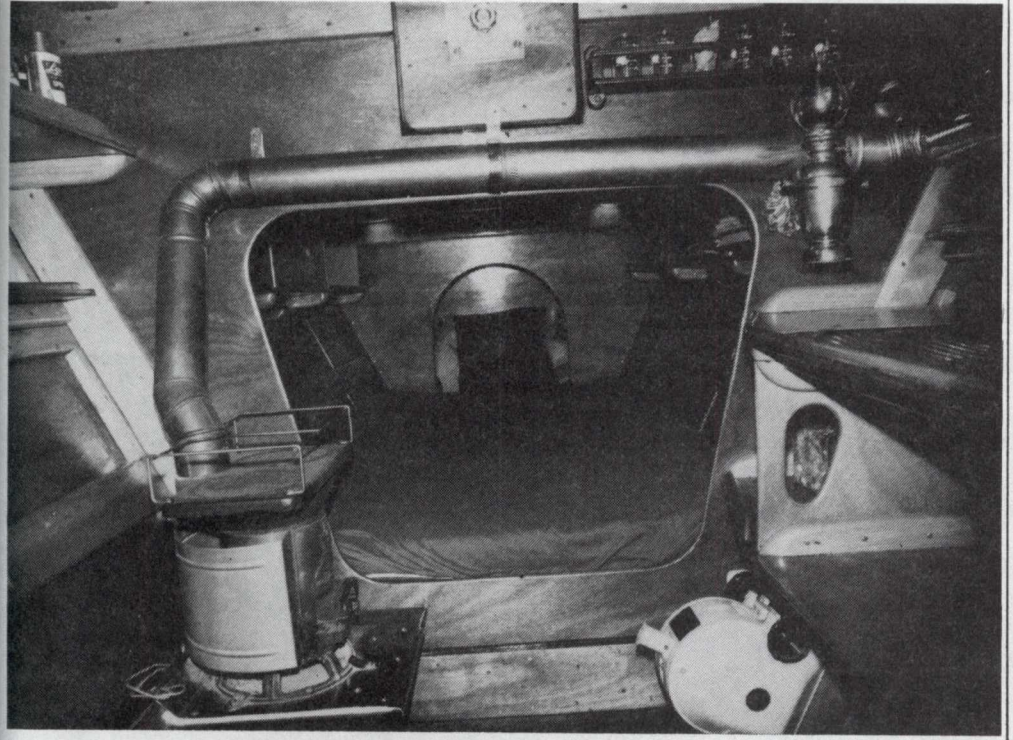
If this is still too big for a Silhouette or Wavecrest, then a smaller fire can be made to fit on a wall bracket leaving the floor free.

I had one with actual fuel volume only about 4 inches by 2 inches by 2 inches. This works well but, of course, has to be stoked frequently.

If all this sounds too complicated and too much like hard work, then I suppose any good tinsmith or sheet metal worker would do the job for you, and if it were in stainless or brass it would be a dandy job.

Incidentally, I am told that one can have a water jacket made round the stove pipe which gives constant hot water and, of course, protection from burns or damaged decks.

"MISS BEATON", *SY Tridentia, Aldous Shipyard, Brightlingsea, Essex.*



Wood-burning stove fitted in the galley of John Bellengers ORO 'PYXIS'

Tiki 31 by J.W.D.

Ernald Pearson, mentioned in the engine section, turned up during the preparation of this issue. He has spent several years in Saudi Arabia. "I don't want, cannot afford, a YACHT" he said "I need a boat that can earn it's keep". If you read the multihull magazines, due to the influence of a few ocean racers, all multihull designs are beginning to look the same. Hull shapes and decks are reminiscent of an aeroplane and/or maximum luxury interior. In the car industry it would be the equivalent of *all* people wanting Lotus, Porsche, Rolls Royce or Mercedes cars. The fact is that in the auto world large numbers of people want practical 'estate' working cars.

The TIKI 31, the equivalent of an estate car, is far more than a development of the very successful TIKI 21. It's true that she has the same hull lines – why not, they have been proved fast and seaworthy; she uses the same building method – again, why not, it has been proved a revolutionary quick building method.

The TIKI 31 is a concept step into the future. It is my belief that just as a sizeable group of people are turning away from the glass tower block style of architecture (post modernism), a sizeable number, like Ernald, will turn away from the aeroplane shape in yachts, particularly in multihull designs.

One can 'liberate' the interior of multihulls by no longer tying it down unconsciously to the concept of a bed, table and chairs with legs, in fixed positions like a furnished house! Such liberation can cut building time down by at least one third, costs too.

Many new concepts are in the new TIKI 31 design. At the moment I am short of words to explain crisply what I mean but the few thoughts I have are explained in the brochure as reproduced below:

Another couple who sailed the TIKI 21 fell in love with the visual aspects of its hullshape and its efficient rig. (They had previously sailed monohulls). They wanted a boat that they could use as a 'Barefoot charter, teaching, sailing boat' during the summer months and, if they wished, as a diving, fishing, charter boat out of the holiday season – able to live aboard for at least nine months of the year in British waters. They did not want a 'yacht', they wanted a boat of character that could *travel* and *work*.

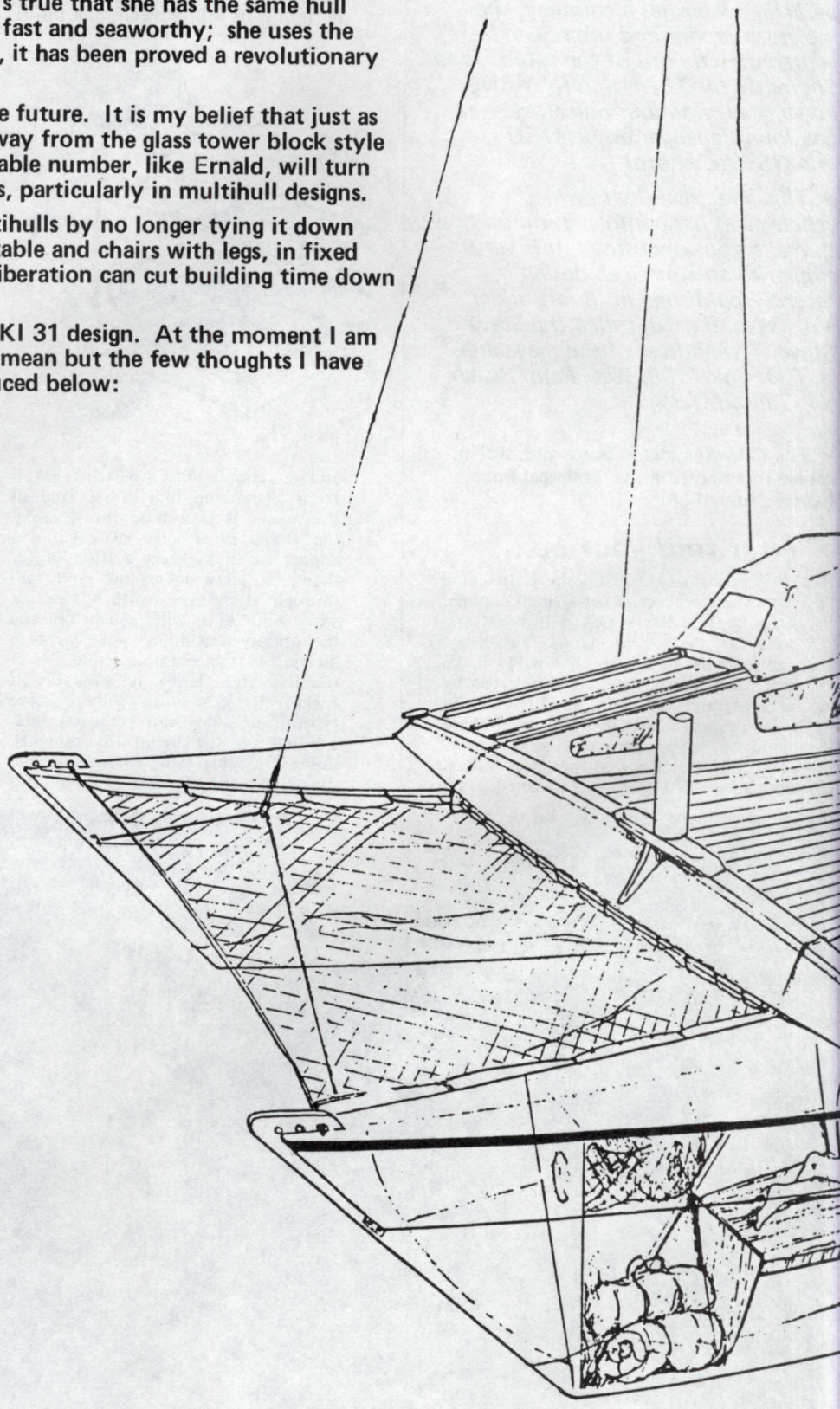
Their requirements, using the TIKI 21 concept, has produced the *TIKI 31 Traveller/Workboat*. Visually, it has the same sweeping lines at the TIKI 21 and 26, but it is recognizable at a distance by its schooner rig.

This schooner rig is using two slightly larger TIKI 21 mainsails. So we know that the mast and rig is light, strong and easily handled. In bad weather the small mainsails are easy to work on. For fishing, diving and sail teaching the two masted rig gives innumerable combinations of balance. There will be a small reduction in windward performance, but we all agree it more than makes up in *allround* sailing performance.

The new builders were attracted to our concept of 'Flexy Space' on the boat. A normal yacht interior has 'Static Space'. Here, rigidly fixed are the bunks – rigidly fixed is the cooker and sink – rigidly fixed is the chart table.

In 'Flexy Space' you start off with 'space' and do not clutter it up with cabin furniture – saving on building time. Cooking equipment of the camping kind (very good and cheaper than yacht gear) can be moved or placed anywhere as suits the mood. Likewise, the sleeping places can be moved around. Seating can be cross-legged or legs stretched out or in Western style down on the floor.

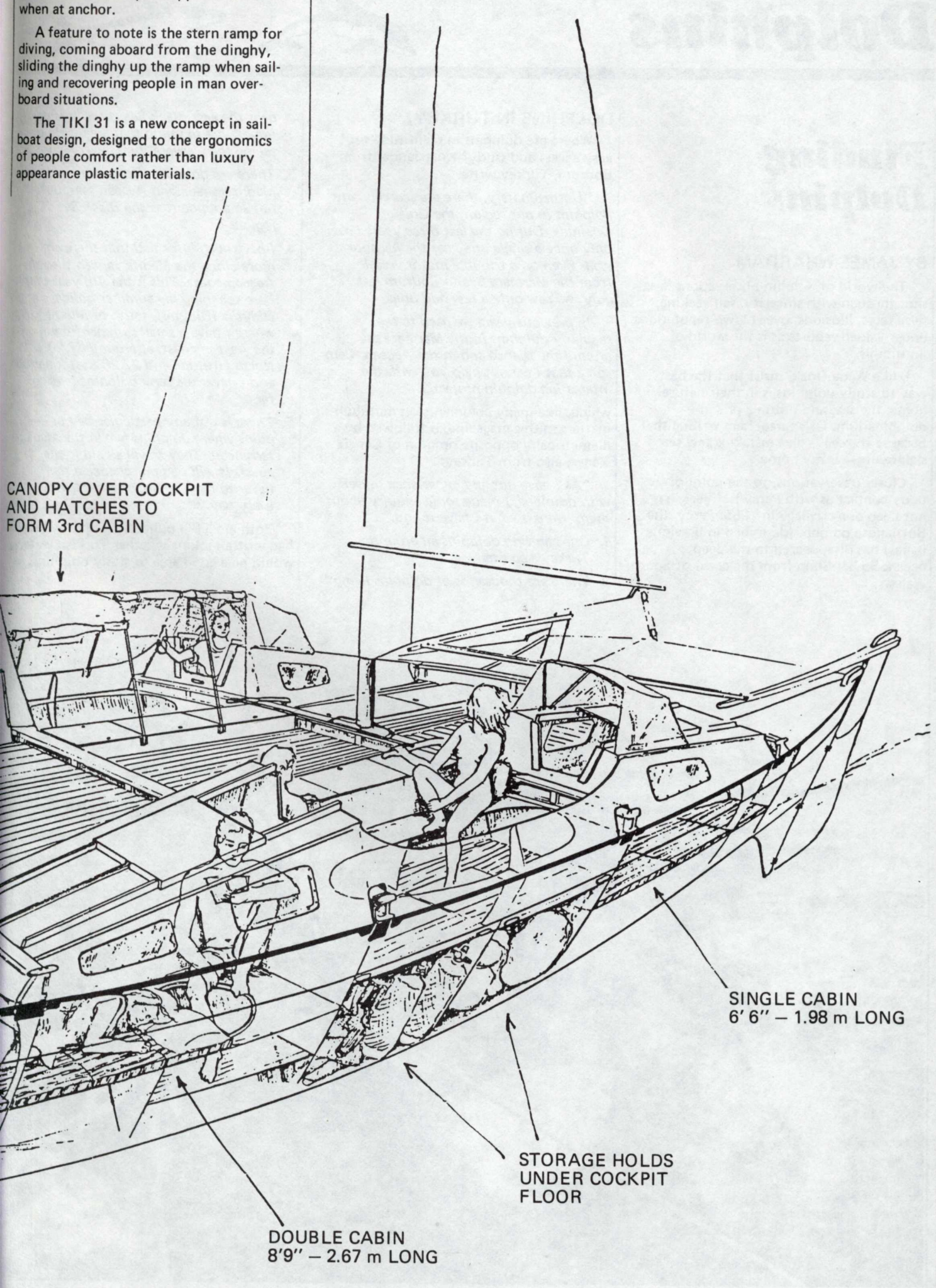
The TIKI 31 has, starting from the bow, in *each* hull a two person sitting headroom cabin, then an 'open' cockpit that can be used, with a removable tough awning cover, as a full standing headroom cabin. With the awning removed, the open space can be used as a fishing cockpit or store space. Aft is a single person cabin. With the two hulls, theoretically, you could sleep ten people!! (of course you would hate them in two days).



The deck space and a deck tent offer even more shelter space opportunities when at anchor.

A feature to note is the stern ramp for diving, coming aboard from the dinghy, sliding the dinghy up the ramp when sailing and recovering people in man overboard situations.

The TIKI 31 is a new concept in sailboat design, designed to the ergonomics of people comfort rather than luxury appearance plastic materials.



Finding Dolpins

BY JAMES WHARRAM

The world of dolphin observations is as shot through with sincerity, self seeking, false facts, illusions, over-blown reputations, under valued reports as is the world of multihulls.

I, like Wade Doak, insist that the best way to study dolphins is in their natural home, the sea, and not in a prison dolphinarium. Of course, I am writing that because the sea – give or take a few sea sick bouts – is my home.

Closer observations, to the point of body contact as with Percy last year, has not been our privilege in 1985. Percy, the Bottlenose dolphin (described in previous issues) has disappeared to the deep ocean. So has Simo from the coast of South Wales.

DOLPHINS IN TURKEY?

Where are dolphins in plentitude for easy access and study? Kurt Jander from Bodrum, Turkey writes:

"Unfortunately, there are scarcely any dolphins in our region, the Gulf of Quelluek. During the last three years I saw only once a single one near the harbour wall. Even on a trip in a motor vessel from the Marmara Sea to Bodrum last July, we saw only a few odd ones.

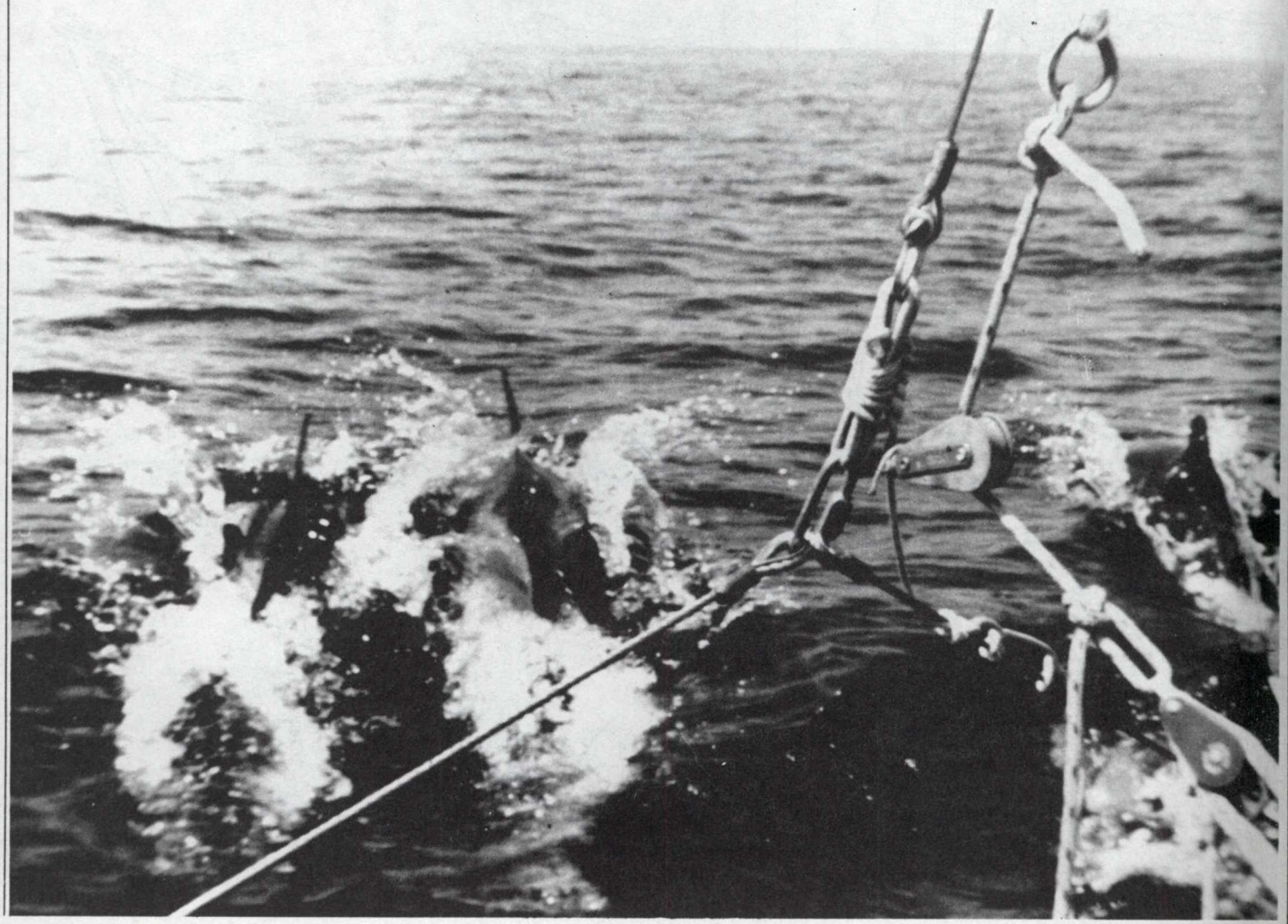
In previous years we used to see regularly dolphins in the Marmara sea around the islands and in the Aegean. I am sorry that I cannot help you with the interesting dolphin project".

which, like many comments on multihull matters in this magazine, is followed by a diametrically opposite opinion of Cengiz Yener, also from Turkey:

"As I have not any experience myself with dolphins, I made some enquiry about them. Here is what I have found.

1. *One can find dolphins all around Turkey's coasts.*
2. *There are thousands of dolphins living near the east Black Sea coast. It is nearly impossible to sail in that area without seeing them several times every day.*
3. *There are dolphins living in the Mediterranean and Aegean seas, but not so abundant as the Black Sea region.*
4. *I have been informed that there are more along the Mediterranean than the Aegean coast. This is the 4th year that I am spending my summer holidays at Didyma (Didymi), south of Miletus, where I have a small summer house, on the Aegean coast, at around 37.20 North lattitude and 27.20 East longitude, and I never met any dolphins here so far.*
5. *There is not any particular bay or point where dolphins live in the Mediterranean. They travel all along the coast. It will be your chance either never to meet them, or meet them every day."*

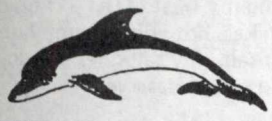
Both are TIKI builders to whom Ruth had written asking whether Turkish waters would be a good area to study dolphins.



GIBRALTAR DOLPHINS

In March this year we shipped our TIKI 21 on trailer with car from Plymouth to Santander, North Spain, then trailed south across Spain to Gibraltar where dolphins can always be found.

Here are the observations of two days to show our system of approach and notation, written by the zoologist Sarah Talbot:



DOLPHIN LINK REPORTS

Gibraltar
Date: 31.3.1985
Crew: James, Hanneke, Ruth, Sarah
Boat: TIKI 21
Wind: Force 1–2, S
Course: South to Europa Point, motor for 20 mins, then sail.
Time: 13.15 approx.

First sight of dolphins – approx. 25/30? – 2 miles S of Europa Point. Many fins, dolphins swimming in different directions – feeding? We approach, when near the group, dolphins swim near to boat and between the hulls, turning on their sides to look up at us, possibly 4/5 under boat at once. Became excited, jumping and splashing. Hanneke in wetsuit, towed on rope behind boat – dolphins don't approach her, hang back and away from boat. Never within 20 feet of boat while Hanneke in water. Frightened of her?

After 10 mins Hanneke out of water, dolphin group dispersed. Sighted smaller groups heading out towards Africa, we follow. Get into another group, 10 - 15 dolphins swimming around and between hulls, very small baby amongst them. More between hulls under boat, showing interest. Again when Hanneke enters water, they leave the boat and stop swimming close. When close, they swam zig-zag across bows and bowriding, some swam 10 feet or so down between hulls. Group appeared to be swimming out towards Africa, jumping and splashing ahead of us. After 30 mins of following them, they were too far ahead and we turned back. On our way in, 2 dolphins passed us, travelling S, very fast.

Left area 15.00 approx. – wind force 2–3, S.

Arrived harbour 16.15 under sail, motored last part.

Gibraltar
Date: 3.4.1985
Crew: James, Hanneke, Ruth, Sarah, Diane
Boat: TIKI 21
Time: 11.25

Left Gibraltar harbour under motor, sea condition calm, wind calm, headed South to Europa Point.

12.50
2 miles off Europa Point. One dolphin seemed to appear from under boat and headed off in SE direction. Scout dolphin?

13.30
Sighted dolphins South, leaping clear of water, appeared to be 5 or 6, approach these.

13.45
As we approached, dolphins swam towards us, had not previously done this. Group of about 15 swam round boat. Diane counted 11 under bows at once. Zig-zag across bows, did not jump right out. Recognize one fin from previous day's sightings – top is torn and flopping down.

Behaviour:
Noticed two
dolphins, one small,
possibly younger,
one larger, swimming
close together, larger
one vertical position,
smaller one rubbing
heads and fins
together – a cuddle?

14.15
Ruth enters water in wetsuit, without rope. Quite a few of the dolphins dived. The others stayed near the boat, unlike previous occasions. Ruth saw about 6 dolphins swimming 6-8 feet below her, they were weaving and swimming beneath her, not looking at her a 'Percy' had done, but she felt they must have seen, and be looking at her. They stayed with her for 3/4 minutes and then left her. Dolphins were still swimming on the surface near the boat. Ruth dolphin-kicked whilst they were with her. Then we tried to tow Ruth towards the dolphins, but could not get her close enough.

14.30
A ship nearly caused us to alter course. Some dolphins went to bowride with it and then left. Hanneke put on her wetsuit. We caught up with the group that had left the ship. When we were as close as 10/15 feet to them, Hanneke entered the water. As before, they stayed 15/20 feet from the boat and Hanneke. She could not see them under water. They were swimming quite slowly and slapping their tails quite regularly (irritation, worry?). Then we towed Hanneke for 5 mins or so and still she didn't see them under water.

15.00
Hanneke back on TIKI 21. Dispersed groups of dolphins sighted travelling S towards Morocco. We turn and head back to Europa Point, under motor.

Additions:
James tried to weave the boat a bit more, using the manoeuvrability of the motor to make the boat seem more lively.

Comments:
Hanneke:
'Felt they were less shy, immediate approach to boat instead of hanging back'.

James:
'They responded quicker, were interested for short time with one person in water. Subjective opionion: Mental feeling given off quite different from bottlenose dosphins and pilot whales – lighter, quick flashing type of interest'.

Diane:
'Thought interest was in boat because it gave them something to play with – not curious'.

Sarah:
'Thinks they were same group as seen previously. Also thought they were less shy in their quick response to our presence'.

We decided to go back to Gibraltar in October; this time with a Video camera and gear and the four months old Jamie. Our aim was to see whether the dolphins would respond to a wet-suited baby riding his mother's back. Unfortunately, the dolphin group south of Europa Point in the cleaner Mediterranean could not be found. A resident group just outside Gibraltar off La Linea oil refinery, though easily found, seemed totally dazed and blase with the large number of ships of all sizes constantly going through their area. The water there was filthy with oil and we added one fact of knowledge, that this particular group accepted the taste and slime of oil pollution. We could not and made no attempts to enter the water to join them.

Ruth Wharram is already planning a trip to Turkish waters. My long term plan is to build the 63 ft. PAHI for long range dolphin searching.

Factually, these reports cannot convey the excitement and the blue sea, with Africa in the distance, and leaping, playing dolphins 10-15 ft. away, but with the Bottlenose dolphins Percy of Cornwall, Simo of Wales and Jean Louise of Britanny (see 'Sea People' No. 1) we had been used to more personal, closer, intimate meetings.

However, the Gibraltar dolphins were the smaller Common Dolphins and showed different behaviour patterns than the bigger Bottlenose Dolphins.

On the Gibraltar trip our intentions had been to see whether any female dolphin would show interest in Hanneke's pregnancy, as certain captive dolphins occasionally had shown interest in their pregnant keepers. There was no sign of interest from any of the Common Dolphins.

I described our trip to Wade Doak as a beautiful holiday, but felt like a tourist with these dolphins. Wade Doak wrote back saying that from his experience, Common Dolphins could remember a boat group over several months and that they would respond in a more familiar fashion in later meetings.

NEWS FROM SEA PEOPLE....

USA

From Marten von Jena, in California, news about his NARAI Mk. IV 'SEA-HORSE', rigged as a gaffsail schooner – see drawing. (Gaff schooner sail plan available from J.W.D. price £5).

My apologies for the long delay in writing, but I wanted to wait until we sailed the boat! And how she sails!! The first time we sailed her, she did around 14 knots and pointed around 45° – so, James, the Gaff rig, as far as I am concerned, is a big success. (She goes about well, too). Thank you for a fine design, and Jeckells did a good job also.

We have been living on the hook in Santa Cruz for 4 months and love it. Called the boat 'SEAHORSE' (which she truly is).

You'll be glad to hear that many people have shown interest, and I'm sure, some of them have contacted you. In this area there are 4 (Wharrams) that I know of: 2 NARAI Mk. IVs, 1 NARAI Mk. I and 1 TANGAROA. The guy on the TANGAROA told us that he had talked to one Wharram owner who said, he survived a hurricane in the Pacific. Have you any knowledge of this?

How is your base in Devoran coming along? Have you ever thought of Fiji as a base? *(Of course we have – H.B.)* I hear only good things about those islands. We hope next year to sail in that direction – although everything takes so much money. We've virtually exhausted our funds to get the boat sailing. I love it, though. The first time I sailed it on a bright sunny day, my heart was delighted and a feeling of exhilaration came over me like nothing I ever experienced. Everyone thinks the boat is Magic. May be I should have called it *that.* Oh well, may be the next one eh?

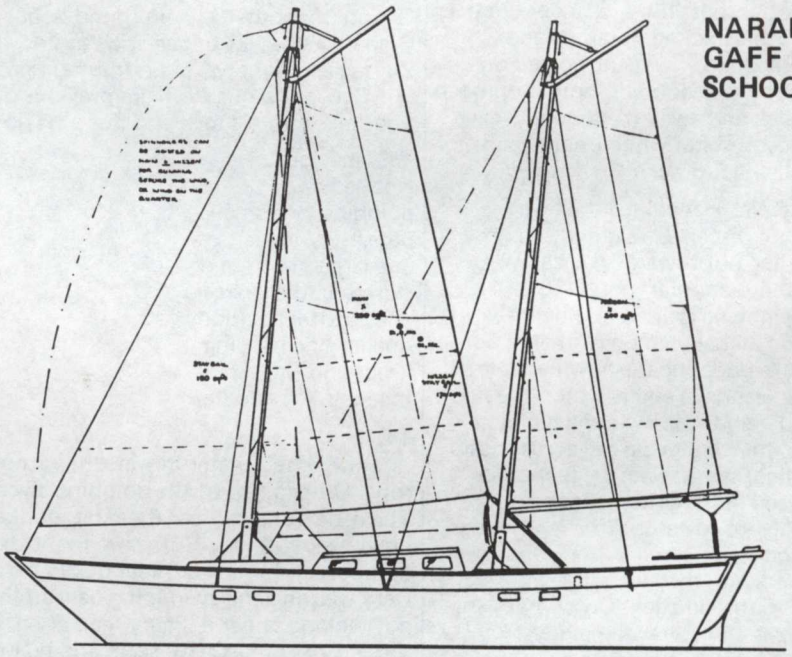
You might be interested to know, I turned the rig into a *standing* gaff. That way, I just unfurl the sails and keep tension on the luffs. It works real well, as I can sail off pretty fast (off a mooring that I put down some time ago). The drawback, of course, is the wear on the exposed sails – can't have everything I guess.

Ed Kyle, Indiana, warns of home-made sails:

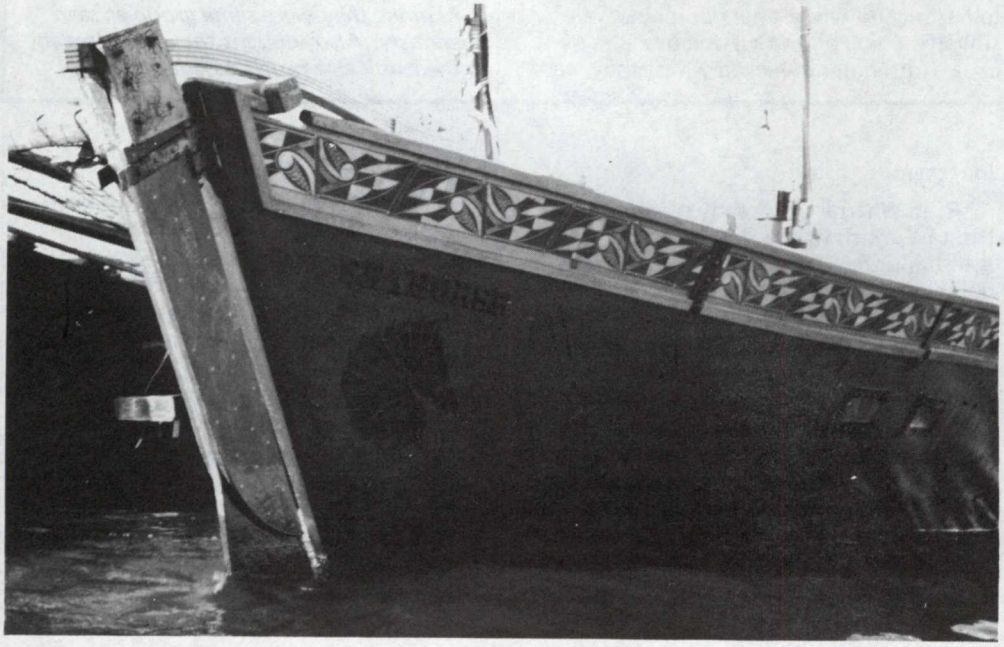
Enjoying my boat (TIKI 21) on one of the local lakes, not enjoying my home-made mainsail. My sail does not do the boat the justice it deserves!

From Robert Childers, Arizona, now builder of a TIKI 26; in answer to a query from Ruth Wharram about the AREOI, he had started to build before:

As to the almost completed hull of the AREOI 31, I am embarrassed to say I sawed it up and disposed of it. A very sad day; 300 hours of work gone in about 45 minutes . . . As costs rose I ran out of my savings and could not get a job. I find now that I am not bitter about the experience, despite the failure, there were enriching aspects to it. I got the sense that building a boat is like building a sculpture; something alive and . . .



NARAI Mk IV GAFF RIG SCHOONER



monumental? Something like the statement you have made, about boats being like tools and weapons that are a part of man. I really am looking forward to building again, starting out. My job is horrible, but it is secure and pays fairly well. And I am very anxious to go 'Trekking'.

Terry Johnson, J.W.D.'s American agent, of 'Binary Boat Systems', P.O. Box 22342, Fort Lauderdale, Fla. 33335, who visited the 1985 International Multihull Festival in Anapolis, Maryland from 28th June to 7th July, 1985, sent us the following short report about his trip from Florida to Anapolis and back in his RAKA 'ANNA J.' with a few comments about the Festival itself. Three other Wharram catamarans also attended the Festival:

I got into the ocean only twice. The first leg of the trip from Miami to Daytona Beach I sailed solo outside. I had a stiff

19–20 knot wind out of the Northeast which churned up the Gulfstream badly. I was sea-sick most of the time to the point I didn't feel like eating. I tried sleeping a couple of times, but the fear of freighters kept me awake. I made good time and made Daytona in 48 hours, but that was 48 hours without food or sleep so needless to say it wasn't really enjoyable. This was the first time I had ever done any solo sailing in the open ocean and I would rather have a crew.

My second jaunt out into the ocean was from Jeckel Island in Georgia down to St. Augustine. The wind had switched from the South Southwest to the East for the first time on the return trip. I had a crew and headed out into the ocean. The wind was about 20 knots on the beam so we had a beautiful sail. We arrived at St. Augustine about 9.00 p.m. It was a little tense getting into the inlet after dark without charts, but we had no problem.

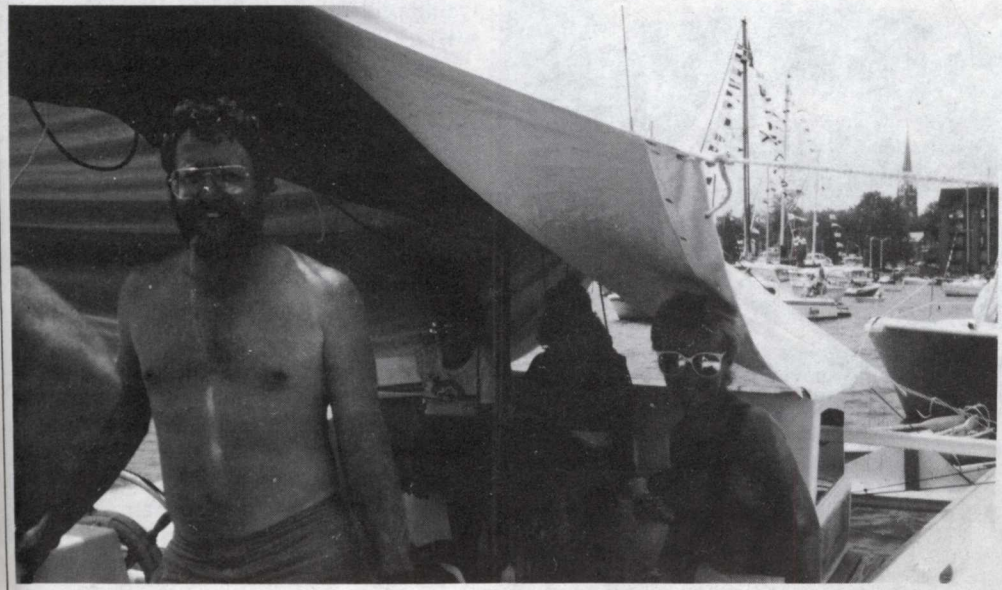
I hit a few storms along the way. The worst being a thunder squall in Daytona. I don't know what the wind speed was, but it was the worst I have ever seen in my 25 years of sailing. I parted an anchor line. Fortunately, my spare was ready and it caught. It held me and a 45 foot trimaran that drifted down on me during the storm. Hurricane Bob hit the 'ANNA J' in Anapolis and she dragged anchor, stopping short of the seawall by only a few feet. I was up in Michigan with my Dad at the time and received a frantic phone call threatening mutiny if I didn't return, therefore I had to cut my visit short and miss the polycats meeting in Canada.

The good times were a few great days of motor sailing coming up, the three dozen crabs we caught in Belhaven, the many great sunsets and the many great people we met on the trip. The boring time was the hour upon endless hour of motoring into head winds on the return trip. The exciting times were when the dinghy flipped during a tack in 5–6 foot seas on the Chesapeake and when we got caught in a cross current and were shoved into a steel monohull while coming up to a gas dock.

Philippines *(above)*
Jeremy Ladd-Cross professionally built CAPTAIN COOK. Note the wishbone boom.

The Festival itself was very interesting, probably more for the people I met than anything else, i.e. Patrick Boyd, the most humorous and entertaining Englishman, and the very serious and informative Jan Gougeon, whom I later found out used to sail with my uncle in Bay City when he was a kid.

Dick Newick took several polls during one of the seminars to get an idea of what type of people were in the audience. Interestingly enough between racing and cruising, cruising won; between catamarans and trimarans, catamarans won; between buying and building it was declared a tie. In view of this, Wharram's home built cruising catamarans were very much in the interest of those who attended. I set out a large stock of literature, price lists and business cards which were all gone after the first break. I talked to many people about catamarans and in all I thought the Festival was very worthwhile.



Terry Johnson on board his RAKA 'ANNA J' at the Anapolis Multihull Festival.

Brazil

SERGIO CHERMONT, President of the ABMO. (Brazilian Association of Offshore Multihulls), the man responsible for the Multihull Movement in Brazil, sent some news to us:

– The multihull movement here is, year by year, increasing steadily and each time a new boat is launched, more and more people become interested. We have great hopes that the economic crisis in Brazil will become less severe, and the new government that will take over on 15th March will take steps for a new time. So more boats built!

– EUGENIO JUNQUEIRA NETO, has installed a little shipyard (boatyard) and is building boats to order (only multihulls!) in the WEST technique at reasonable prices and with great skill. He lives in JOINVILLE – Sta. Catarina, and has very skilled carpenters who do the job nicely and quickly. He has plans for the future for export boat kits in Brazilian cedar or mahogany in the WEST system. He has several orders for WHARRAM cats.

– HAROLD VOLLRATH bought his TIKI 21 plans, and as he has no room in his house to build, he had his boat built by EUGENIO JUNQUEIRA and it was in the water in the incredible time of 2 MONTHS. All people are enthusiastic about the TIKI for her superb construction and marvellous performance! I think very soon more people will be sailing in new TIKI's.

– JOHAN HECKHAUSEN bought his CAPTAIN COOK plans and he too has ordered his boat to be built by EUGENIO JUNQUEIRA. Let's wait and see how

AREOI 'BANANA SPLIT'

long it takes for his boat to be built, and how nice she will be!

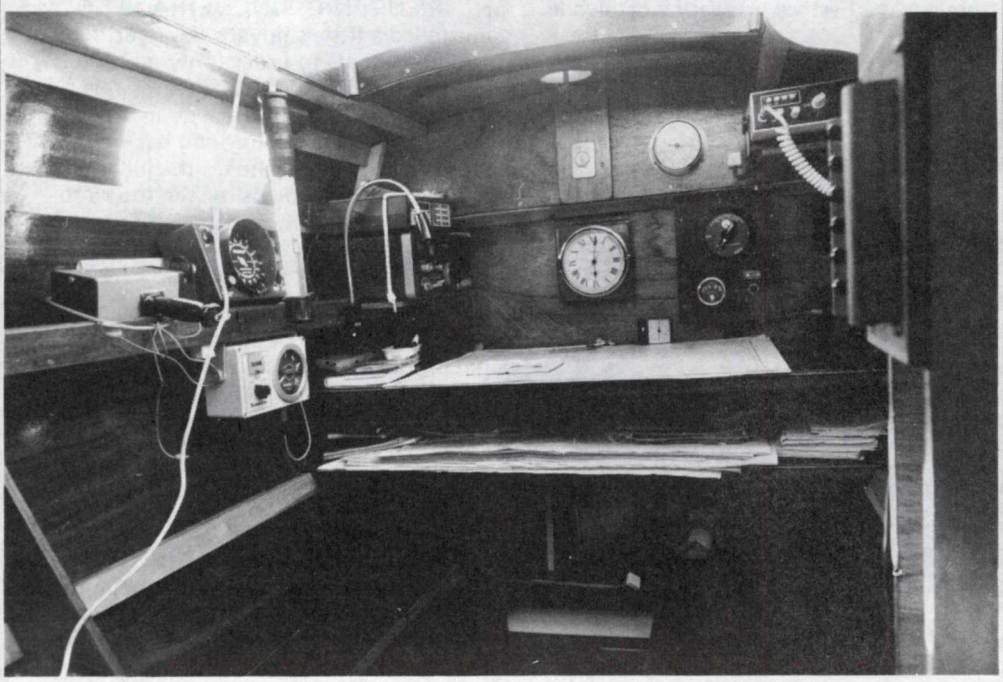
– JOSE LYRA is at the painting stage on his AREOI 31 and expects to put the boat in the water very soon. I am expecting the AREOI in Rio as soon as she is launched.

– BANANA SPLIT; the AREOI 31 of JUAREZ VERBA is sailing from RIO GRANDE DO SUL along the Brazilian coast on the Carribean route, and is stopping in all the beautiful places on the Brazilian coast.

– GILBERTO S COSTA is building his TIKI 21 slowly because he has only little time at the weekends, but he tells me that during the vacation he expects to make a great effort to finish his boat.

– WILSON ZAFALON has bought his CAPTAIN COOK plans and will build his boat in his own house, where he has a great (large) place (space). WILSON is a professional diver and master of Yoga and expects to retire in 4 years when he expects to have his boat in the water for world cruising with his wife and sons!

Chartroom of AREOI 'Gadzooks'



Britain

Peter C. Richardson, AREOI owner in Scotland, writing on speeds achieved this summer:

Despite a very wet and windy 'summer' here in Scotland, I have managed extensive cruising in AREOI 'GADZOOKS' to the Outer Hebridies and Isles in between. Maximum speed (broad reaching) this year was 17.8 knots.

From Andrew Beard, P.C.A. Treasurer and builder/owner of AREOI 'AUDIAMO':

I very much regret that I will be unable to join you at the forthcoming P.C.A. weekend. My thoughts will, however, be with you and I trust that it will be as enjoyable as 1984.

All being well I will bring my boat to the 1986 meeting as part of a 3 week cruise. Since the launch I have been down to her for 3 weekends and am gradually getting her ship-shape. Apart from the depth gauge all electrics are now working OK.

With the big genoa she sails much closer to the wind and provided one keeps her just slightly free, she romps along and tacks through 90°. Fastest speed so far 10.7 knots (Stowe Navigator trail log) towing a heavy pram dinghy in force 4–5.

He later wrote:

The rough weather has provided an excellent opportunity to "break-in" AUDIAMO and thoroughly test her performance. She has proved to be comfortable, safe, relatively fast and has provoked considerable local interest.

Abandoning the dagger boards has not apparently affected her performance. Her directional stability is excellent and she can be balanced by fine turning of the furling main or genoa. Provided adequate genoa is set she tacks faithfully unless a heavy sea is running when we find it more certain to gybe.

We have a 'Stowe Navigator' trail log which is reputed to be very accurate and in use is superb. Average speed of 7.5 knots in force 4+ commonplace and fastest speed to date was 12.5 knots.

Leeway is far less than on most monohulls and with the large genoa she is reasonably close winded. I sheet the genoa on a track running along the cockpit seat back. When reaching or running I lead the sheet through a snatch block attached to the ends of the 4th cross beam.

Gales and torrential rain have convinced me to devise a "cuddy" for use when sailing and a full size decktent for use at anchor.

Her low freeboard results in the leeward foredeck being awash a great deal and consequently the storage lockers are not totally watertight. The windward foredeck occasionally scoops up a wave and much of this inevitably arrives in the cockpit. However, had the weather not been extreme this "summer" then I would probably have said how dry she was?

I have fitted an LVM 50 wind generator and Mariner 15 outboard. Both have proved to be reliable and up to the task.

A 24" scale model of 'AUDIAMO' is now well advanced. Could this be of use for you at the Boat Show?

Suggestion from Terence Adams:

As the trailer/sailer side is growing, how about getting sailors to prepare a guide to where around the coast one can launch without hassle? I contribute Blakeney (Norfolk) – free and there is a wide hard at low tide – with good road access and cheap parking; a magical sailing ground along the coast and into the creeks of the north Norfolk coast if you like mud, marsh, solitude and wild birds, and as a substitute for dolphins there are seals who look like Georg Gross cartoon Germans.

Ireland

Andre Viljoen, TIKIROA builder, in Dublin, has sent us news about other builders in Ireland with a progress report and ideas about his own boat:

1985 has not been a vintage year for Irish builders. During June, July and August we have had the worst weather for something like 30 years.

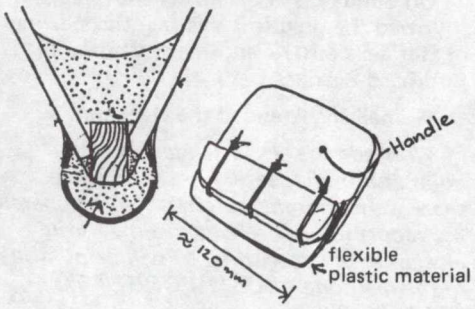
Fiach O'Brochalan, the CAPTAIN COOK builder has not been able to progress very much on his first hull. He is building under trying conditions. His "facility" is a tent suspended from trees and tied to a garden wall. Its like some huge transparent neolithic tomb!!

My own TIKIROA has been delayed by weather and material (glassfibre) delays. My hulls have been glassed perfectly using the squeegee technique (see sketch of reusable squeegees). Two of us did an 8m. panel each working from the centre outwards. Coating wood first with epoxy, then smoothing cloth down by hand, then final wetting by squeegee. We took about 3 hours to complete a side, counting time from the first epoxy coat. To avoid much fairing later, we cut off the ragged edge of cloth with a blade before the resin hardened.

Tilting the inverted hulls by 8" was enough to allow the topsides to be glassed. This avoids the manpower and space problems associated with glassing hulls on their side.

My delays were caused by the arrival of new cloth from Wessex R & A. This cloth was full of folds and undulations so it would not lay flat for wetting out. For keel bands I have used Maurice Killen's idea of p.v.c. water pipe (see last Sea People). Instead of screwing it in place I've used epoxy rivets to hold it. On a test piece the pipe had to be broken to remove it. To cut the pipe I used a jigsaw and workmate, someone held the far end to avoid it twisting, which happened when I did it alone.

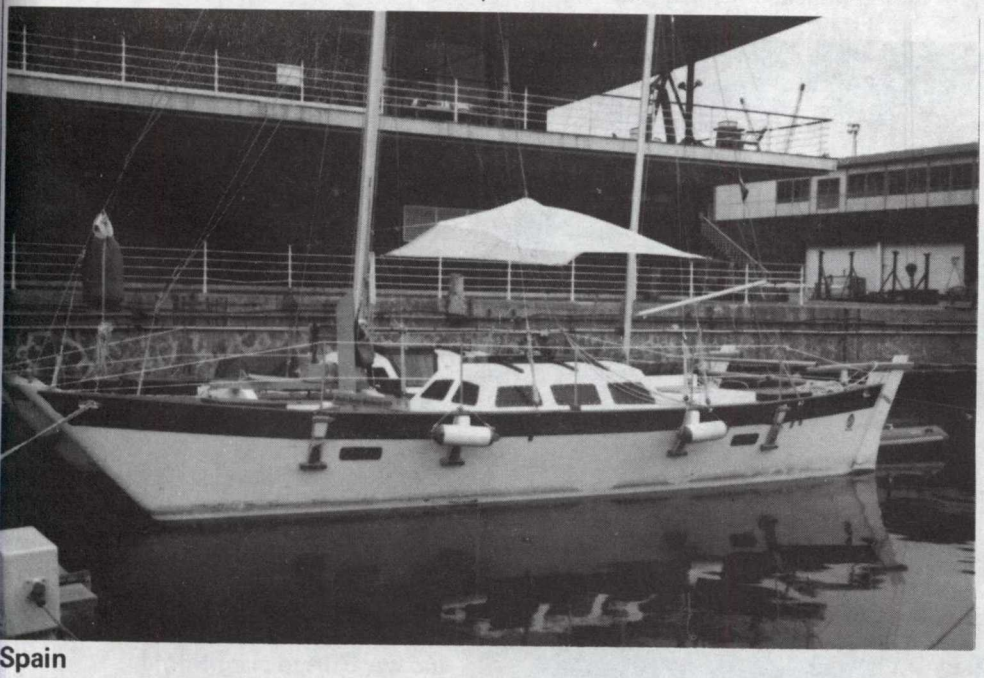
RE-USEBLE SQUEEGEES



Gerard Fitzpatrick, another Irish builder of 2 Wharrams, a TANGAROA and NARAI, recently took me sailing on his 26' catamaran 'STAMPEDE OF COWES'. He wanted to show me the effect of deep dagger boards and rudders, both 4' below waterline when lowered and similar to the TANE update drawings. Conditions were ideal for a light-weight boat, 'STAMPEDE' weighs about 1 ton, we had flat seas and force 2–3. The manoeuvrability and lack of leeway were both very impressive.

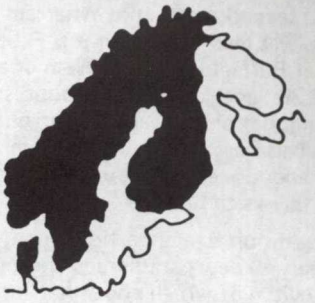
After this experience, I think I will build a central pivoting centreboard under the platform as on the TANE updated drawings. *(Also used on the American racing 'STILLETTO' catamaran – J.W.).* It will allow easy raising and fore and aft trim for balance. However since the casing needs good bracing to avoid vibration and resist considerable leverage I will first sail with no boards to see how she balances. This should be most useful for short tacking and confined manoeuvering.

Launching date, late summer 1986?



Spain

TANGAROA Mk IV of Tony Garcia in Barcelona. Note the lashed on crossbeams.



Finland

Jedrek Prusak, whose 'Baltic Cruise' with his family on his TANGAROA MK IV 'AMANDA', was published in 'Sea People' No. 1, followed by his voyage to Portugal (see No. 4 p.23), has now safely reached his home in Finland again. He, like John Heath on 'YIN YANG' used the French Canals on his return trip. He promised us a longer account, but in the meantime describes his feeling of trying to adapt again to a 'normal' life.

I'm still 'sailing', however two months have gone since we've got home. The cruise is over, the land-bound life started and that is the trouble. I simply do not fit to it. Something strange happened to me. My mind is restless and can't see and point to things I'm doing here! Our cruise, our boat gave us a chance to taste a different way of living. It was so good, however hard at times but full of personal satisfaction, logical and close in our family circle. The boat, the sea and all those activities concerned with sailing and living on board kept us so warm together . . . Now I had to jump into the 'normal life', back to work, back to society standards.

After all, I feel that going cruising is really a dangerous business. Once you get the cruising spirit in your blood, you leave the 'normal people's' point of view. However there were some times I wasn't happy at sea for different reasons but *now* I realise – all of it was far better than being a meaningless piece of fast-going society!

I remember my first sail in '83 – I was surprised by my first gale, by those waves . . . by the sea. It was my 'sea-shock'. Now I'm suffering a hard 'land-shock' . . . In fact, thanks to Jim – all what's happened to me, to us, it was his 'thing'. He was the key, I grabbed it and opened the gate to the deep (and shallow) sea. Pity that lack of experience at the first stage of the trip didn't let me sail further. If I would do it again, certainly I would sail across the Atlantic and back as the usual route says.

Germany

Belated news from Wilfriede Magerfleisch on the 'Friends of Wharram Catamarans' meeting in Germany:

The second meeting of Wharram Cat friends was held in Kiel on 9th February, 1985 at Raffael Benner's. We met at Castle Bredeneek where we found superb accommodation in beautiful surroundings. Raffael also organised sleeping quarters for us and looked after our breakfast. Many thanks to him.

In addition to the participants from last year, 40 new catamarans and owners were invited of which about half turned up. Altogether 27 members attended. People started to arrive on Saturday afternoon. They brought with them drinks, salads, cakes, also, of course, photos, sketches, ideas and questions. Again, conversation started straight away, all in a casual friendly atmosphere. The afternoon was given over to the exchange of information and getting to know each other, with coffee and cake breaks in between.

After the evening meal Anne Nienaber showed slides of her launching, a very memorable experience as her TEHINI had to be brought from its building place to the water under police escort.

Raffael Benner showed slides of his summer cruise on his ARIKI to the Danish Islands and the Baltic Sea.

Georg Sticker's slides gave occasion to jokes and laughter. He had to carry one half of his boat onto a low-loader with man-power alone. This hull is now in a timber yard, open to the view of the surprised customers.

Georg also brought photos taken on a journey to Papua New Guinea. They showed the fishing boats (Proas) of the local people. Proas are being built there with the most simple materials (sisal rope and tree trunks), without nails and with, for us, pecuiiar rigs. For centuries these boats have been used successfully and unchanged for fishing. The flexibility of these boats is remarkable.

Burkhardt Pieske showed a video of a cruise round South America which confirmed again what all catamaran sailors know: Catamarans provide a safe and comfortable way of sailing.

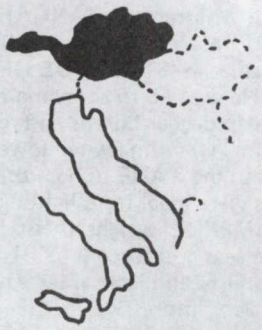
'Around Cape Horn', another film, by and with Bobby Schenk contributed to the general amusement, as the rustfree Fissler saucepan didn't fall off the stool even in a force 9, we rarely laughed so heartily.

Discussions eventually continued into the early morning hours.

On Sunday, after an excellent breakfast, followed the practical part, i.e. the viewing of Raffael's ARIKI and the workshop of Burkhard Baader.

A small snack ended the weekend.

Wilfriede has also attended the Bandholm Multihull Meeting last July where there were several Wharrams. Unfortunately her report has not arrived in time for inclusion in this magazine. It will be published in the next one. DON'T FORGET TO SEND IT Wilfriede.



• MALTA

Austria

A. Wentseis, sent long awaited news about Helmut Fink's CAPTAIN COOK 'RAINBOW BIRD', pictured in Sea People/Sailorman No. 2 page 15:

In June I have been sailing on Helmut Fink's PAHI 42. We started in Venice and went down to Corfu. It was a nice trip without many troubles. I think you will be interested in some photos – because so far I know there are not many PAHI 42 finished. The boat is built exactly to plan – only the cabins are somewhat lower (headroom 1.80m.).

She is built to a very high standard: Jeckells sails, mast from Sailspar, top quality fittings, a lot of instruments etc. I have been sailing on several Wharram boats including my own HINEMOA which I sold, on NARAI 'BILBO', NARAI Mk. IV 'RISHU MARU', TANGAROA 'SOOEROENA'(?) (which my friend Wolfgang Wappl sailed from the Mediterranean to Australia), and my plans for the future are having my own boat myself. Maybe one of your designs again (perhaps a TANGAROA Mk. IV).

Malta

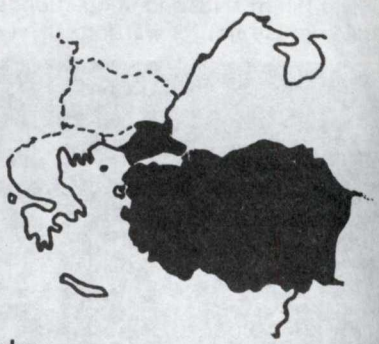
News about the first TIKI 21 built and launched in Malta were published in the Maltese yacht magazine 'Mariner':

In our issue 3, we published a report on the James Wharram design, the TIKI 21. One of these sporty cats is now moored in the bay of Marsascala. It has been built by a sailing enthusiast who spends most of his spare time on it. The owner, Emanuel, built it with the help of a set of plans which he bought from the designers. He said that these plans were so comprehensive that he just followed them step by step until he finished it.

Commenting on the TIKI's performance, he stated that it far exceeded his expectations, which were very high in the first place. The boat is very light and seaworthy but it is well under control all the time, whether it is under sail or power. The two small cabins will afford some accommodation but a tent, very similar to a camp, is placed in the space between the hulls giving privacy and shelter.

We are of the opinion that boats of this kind in Malta will enable the general public to acquire low cost coastal boating (trekking) which will help otherwise boatless people to enjoy the magnificent sea.

Helmut Fink's CAPTAIN COOK 'RAINBOWBIRD' sailing in the Adriatic.



Turkey

Kurt Jander writes from Bodrum, Turkey, about the launching of his TIKI 21 'KALAMAR' according to 'local customs' (translated from the German by Ruth Wharram):

Probably the first TIKI 21 built in Turkey was launched on 5th September, 1984. According to the local custom, a cockerel was slaughtered and its blood smeared over the bows and rudders. But we did christen her later with champagne though. She is called 'KALAMAR' and was built to plans No. 111.

Thanks to the good plans and excellent building descriptions there were no

TIKI 21 'KALAMAR' in Turkey

problems during the building. I did however take longer than 400 hours because there were countless cigarette breaks with the local fishermen, who were at first very sceptical about the method of construction. But meanwhile they have become, just like me, convinced about the qualities of the boat.

It is bery noticeable that our local fishermen wave happily and enthusiastically when we sail past them, whereas owners or charterers of larger yachts look away, embarrassed.

I can only confirm what Dave Greenwell wrote about the TIKI 21. (Practical Boat Owner, May 1984).

Israel

M. Barzam of Israel sent news of other builders in Israel and about scubadiving with his TANE 'TAMDU':

My TANE 'TAMDU', after three years in the water, still goes strong although the time has come for a new coat of paint and some minor repair.

Lately I have been using her for scubadiving and spear fishing. What an ideal platform she is for it, carrying at times as many as five divers with full gear. Her low free-board and step shaped rudder makes getting in and out of the water easy, even with all the cumbersome equipment.

Other polycat news from Israel:— Yuval Rapaport has finished his PAHI 31 and after some preparations set sail to Cyprus and the Aegean. The boat is beautifully finished, I had a chance to sail with them but the light winds did not reveal the boat's full potential.

New Zealand

Ted Berry, J.W.D.'s New Zealand agent, of 139 Hinemoa Street, Birkenhead, Auckland 10, sent this recent news:

The beautifully built HINEMOA of the late Prof. Slater has been wrecked on the Coromandel coast. It either broke its moorings or was set free and battered itself to pieces on the rocky coast. This boat features in the photograph section of 'In the Wake of the Sailorman'.

'OWL', a competently built HINEMOA suffered a freak accident recently — she was capsized while on the hard. The boat was flipped by a violent guest which broke the mast but caused little other damage. This happened to my old HINA in Nelson. I guess it happens ashore, though not afloat, because the boats are light, they can't slide sideways on the hard and because they present quite a lot of windage.

Mike ? (TANGAROA 1 'BRIGHT EYES') set off for Australia last July (mid winter), but a strong northerly and a very sick crewman forced him to turn back. Mike, now settled in Australia, sold 'BRIGHT EYES' for $20,000.

Other boats to change hands have been Peter Kerrod's ORO and several TANE's — for about $6,000 — 7,000.

There is a lot of building going on here. I saw a PAHI 31 being expertly built by Charles McDonald in Hamilton. He is using Kauni ply with teak trim and the boat, nearly ready for launching, is of a professional standard — as is the first PAHI 31 to be launched in NZ — built professionally in Tauranga for Tony Murray.

Here is what Tony Murray himself writes:

"I built my AREOI 'KAPAI' (Maori for 'good') with the help of two professional builders in 6 months, and it has cost me close to $30,000 (approx. £14,350). That includes professional labour of about $10,000 (approx. £4,785), boat tax of $3,500 (£1,675), stainless steel fittings, alloy mast, stainless rigging and roller furling.

Despite being somewhat of a drain on our resources we do not owe money and having sailed it are finding out that a dream realised is priceless! We think we have had it planing at about 12—14 knots for periods of 30—40 minutes and that sent the adrenalin racing through our largely inexperienced-in-sailing bodies."

He wrote again after his first long trip with his family:

"Have just been away with my wife and two young boys (5 years and 19 months old) on our first long trip from our home port of Tauranga in the Bay of Plenty, visiting islands like Major, Skipper, the Mercury Islands, Great Barrier Islands and Waiheke, which is near Auckland. We met schools of dolphins on a number of occasions which excited us all tremendously, especially my wee boy who can't say 'dolphin' yet but knows what they look like now!!

Learned a lot during the three weeks and 400 odd miles of mostly sunny weather. 'KAPAI' performed well, handling 30—35 km. winds and 5' beam and 8'—10' aft of the beam swells quite steadily.

It may be of some interest to those who believe in propitiation of the spirits, that we followed the Maori custom of throwing food to the spirit that guards a rock at the mouth of Tauranga Harbour. Three weeks later I caught 4 Kahawai, one after the other, in choppy swells at the mouth of the harbour as we cruised in at the end of our holiday. We were repaid handsomely and during the whole time experienced no seasickness, some close moments and exciting sailing. Perhaps the Spirit was with us! Nice to think so.

Saw several Wharrams whilst cruising — one used for fishing, a TANE I think. A trim TIKI 21 for sale and a NARAI or ORO. Mine is the only AREOI sailing here at present as far as I know."

In October '85 he wrote:

"Not long to go before we sail North to greet the 'HOKULE' A which is due in the Bay of Islands mid-December. We are looking forward to seeing this replica of a Polynesian voyaging canoe. Better yet, I'd love to have a sail on her. 'STAR OF GLADNESS', that's her name.

Jumped in with a school of dolphins in the Bay of Plenty during a Labour Weekend sail out to some offshore islands. Had a fantastic 45 minute play with them. Hoping to do more of the same on our trip North."

David Munster is well through his PAHI 42 project. Other PAHI 42's are

being built in Invercargill by Alan Giesey, David Yorke and David Neilson.

Don Brazier now has both hulls of his NARAI Mk IV turned up the right way and is making a careful job of the interior. Tony Wood has just completed his HINEMOA. This boat, built to a high standard, features a wishbone boom. The boat looks good and sails very well.

There seems no doubt that the standard of construction of Wharrams in New Zealand is always improving. Down in Little Shoal Bay at present is the TANGAROA 1 of Dave Sandyford – superbly finished to a high standard in all respects. All corners are rounded off, all angles have a glass fillet to radius the curve. The topsides finish is very smooth and is complemented by extensive use of untreated hardwood as trim.

Australia

Steve Goodman of 'Auscraft', J.W.D.'s Australian agent wrote about a project that he and various local people were supporting, to help young people "in conflict with the establishment":

Peter Thompson is a youth worker attached to High Schools in the Townsville area of North Queensland. His work is with young people who have gone too far in conflict with the establishment to be allowed back into schools, but have the potential to respond to friendly intervention in their lives.

Peter has bought a set of TANENUI plans which he is using as the basis of a project to help his lads. Together they will build and sail this boat, and hopefully the youths involved will develop personally from the project.

The boat will be called 'PINTEADOS', which is Jamaican for "The Pilot". The project is being supported by various local manufacturers and unions, and AUSCRAFT, the Australian agent for James Wharram, provided the plans at a discounted rate.

An invitation to Wharram sailors by the 'Terrigal Blue Water Sailing Club' from Russ Buchanan, 60 Hastings Road, Terrigal, 2260 N.S.W., Australia. Tel. (043) 846916. 13.8.1985:

Terrigal Blue Water Sailing Club would welcome any Wharram sailors. We are situated halfway between Sydney and Newcastle. Gosford has good facilities also nearby with its waterways and good anchorages with ample shelter. A beautiful area to sail amongst the dolphins. Feel free to pass on my address and phone number to any interested sailors.

Have you read?

By J.W.

LIFE AFTER DROWNING

Did you read *'Life after Drowning' in* the 'Sunday Times' magazine June 16, 1985? It was an article on the work of an American, Martin Nemiroff, in continuing to attempt the revival of 'drowned' persons after they technically appear to be dead. The general medical opinion has been that after six minutes not breathing brain damage is automatic. In contrast Nemiroff and people agreeing with him are saying that people can be revived from an apparent death after as long as 40 minutes underwater. What helps in this survival possibility is the cold water, i.e. below 70°F (21°C); and the reason for it seems to be based on the mammalian diving reflex.

The importance of this to the readers of the 'Sea People/Sailorman' is that you might come across a drowning and apparent death situation but should never give up attempts of resuscitation.

I presume, the article can be obtained from the 'Sunday Times' archives (220 Gray's Inn Road, London WC1X 8EZ).

Here are the general advise hints in case of emergency, as printed in the 'Sunday Times':

In case of an emergency . . .

HOW TO SAVE A DROWNING PERSON

Stage 1: Act quickly, resuscitate in the water if need be.

Stage 2: On land, lay victim on back – kneel beside shoulder, look for chest movement, listen for breath, feel for breath on your cheek – turn victim's head to side, pull tongue forward, clear air passage of vomit, seaweed, chewing gum, dentures etc.

Stage 3: Tilt head by placing one hand down on forehead, lifting chin with other – pinch victim's nostrils, take deep breath and cover mouth to mouth (for small child cover both mouth and nose with your mouth) – blow quickly four times without interruption, look for chest rising; if it doesn't, recheck air passage or improve mouth-to-mouth seal.

Stage 4: Take deep breath while victim's chest deflates – continue breathing into victim about 12 breaths per minute (20 for child).

Stage 5: If spontaneous breathing begins, turn into recovery position on his side, head positioned to ensure airway open, uppermost arm and leg bent to support body, other arm placed alongside back to prevent rolling. This position prevents victim choking on vomit.

Stage 6: Once you have breathing try not to let victim die of hypothermia. Remove wet clothing, wrap in blankets or sleeping bag (and some experts implore get in naked alongside giving body to body warmth). Never give alcohol which aids heat loss and always, no matter how encouraging, get expert medical aid. Practical lessons, including external chest compression which may be vital in addition to mouth-to-mouth are available in all areas by the Royal Life Saving Society, St John Ambulance Brigade or British Red Cross Society.

Illustrated poster (free) and booklet "Resuscitation for the Citizen" (75p) are available from Resuscitation Council (UK), Hammersmith Hospital, London W12 0HS.

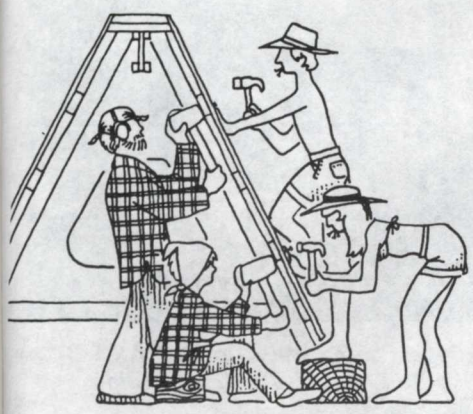
HOW TO SAVE YOURSELF

Extremely cold water can kill quickly (drastic cooling causing heart failure or hyperventilation) or slowly through exposure. The average person might last six hours at 15 deg C (59 deg F), or one hour at 0 deg C, and temperature in the Dover Straits in mid May was 49 deg F. If you have no option, try to:

- Enter water as gradually as possible, controlling breathing against involuntary gasps and pinching your nose.
- Keep clothing ON including shoes and hat. This helps floatation and every layer slows heat loss.
- Cling to whatever floats. Get as much of the body as possible out of water, especially your head through which you can lose 50 per cent bodyheat.
- Life jackets do not significantly aid thermal protection, although some specific foam vests can slow the cooling by 30 per cent.
- Unless forced, do NOT try to swim to the shore. The cold dramatically impairs even a strong swimmer's ability and judgment (the average person is unlikely to swim more than 1km in 10 deg C) and activity increases heat loss by reducing insulative effect of clothing and by stimulating blood circulation to arms and legs instead of primary defence.
- If you have a life jacket or buoyancy aid, your best chance is restful floatation – the H.E.L.P. (heat escape lessening posture) with the head above water, knees up, ankles crossed and arms hugging sides, virtually the foetal position. If more than one, huddle together, chest to chest, with children, whose heat loss is faster, sandwiched between adults.

Roly Huebsch' Building Book

What no-one has read yet are the first four chapters of Roly Huebsch's proposed book on the building of his NARAI MK I., Roly Huebsch was the former editor of the Canadian 'Polycats' magazine. His clear writing and beautiful drawings are well known to past 'Sailorman' readers. Indeed, it was hoped that he would have become the editor of the 'Sea People/Sailorman' Magazine, but he is now sailing away on his boat. He offered us extracts of his book for our magazine. We will use them in extremis in the appropriate place, but it would be better if readers would write directly to Roly Huebsch, urging him to finish his book and buy it directly from him. In that way, he will be encouraged to finish what can be a beautiful and useful book.



FASTENING THE PLANKING
"inside" crew protected from noise and glue drips

His address is: 214 Glebemount Ave, Toronto, Ont. M4C 3T4, Canada. (At least that *was* his address, for I have just had a letter from Tom Jones saying that Roly and Ginny Huebsch are staying at their water frontage for a while as Roly had to do some work on his NARAI 'OBOREA'. This means, they are already on their planned voyage, and I don't know whether the book is still in the making – Ruth).

SAILING THE FARM

Several people have drawn our attention to the book *'Sailing the Farm'* by Ken Neumeyer. It can be bought through the American 'Multihulls' magazine (421 Hancock St. Quincy, (Boston) MA 02171 U.S.A.) for $8.95 (plus 3.00 p & p in the US, $3.50 overseas surface mail) or in Europe through Evecom BV, De Lairessestraat 80hs, 1071 Amsterdam, Holland for f38.25.

Here is what Robert Childers wrote about the book:

"The cover says: 'Independence on 30 feet. A survival guide to homesteading on the ocean.' Basically, that is the tone of the book, that one can do very well afloat far from land with whole grains in quantity to use as sprouts; a solar drier to dry fruits; seaweed and fish when these are plentyful and cheap; a solar still for water etc. He gives designs for the drier and still and lots of recipes to use seeds and grains, as well as going into the finer points of storing these effectively in plastic bags, vacuumed or nitrogen flushed and sealed.

My own opinion is that the book contains a lot of useful information regarding food; refreshing ideas of a practical nature. Not everybody is prepared to give up canned goods and familiar foods (and noone needs to entirely), but I have in the past used whole grains, beans, nuts etc. as an almost exclusive diet and felt very well for it. In style, Ken Neumeyer is a little bombastic, but all in good fun.

He also says about seaweeds, that most are edible except a brown algae of wide habitat, Desmerestea, easily identified by its sulphuric acid content (taste) and another, Lyngbya, which is very thin like hair. He says, never eat seaweeds (seavegetables) smaller than a piece of string. He mentions Spirulina algae and recommends to put this in a survival/disaster pack as it is 70% protein. A kilo will keep a 75 kilo man alive for a month! It is also expensive.

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TANGAROA MK IV Part professionally built, maintained to highest specifications with extra genoa & Mizzen Staysail, cabin heater, Hutchinson Tender and 17 hp Suzuki outboard. – £10,000. C. Maclaren, Hatfield Cottage, Hatfield Peverel, Essex. Tel. Chelmsford 380534 (UK).

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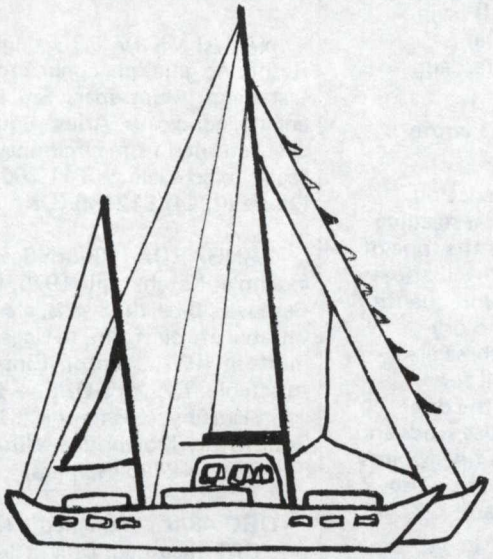

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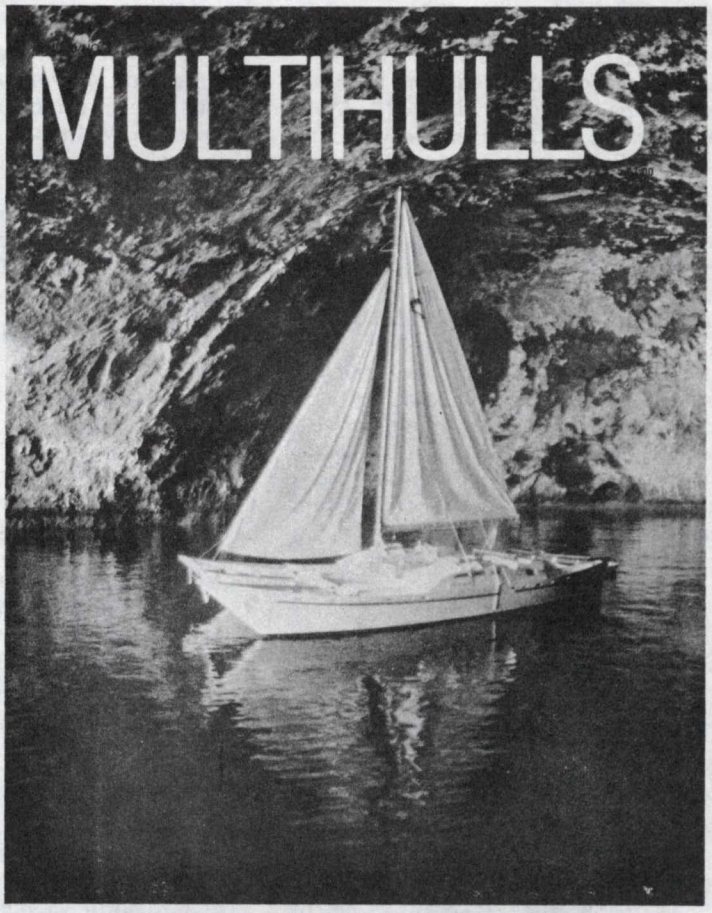

January/February 1984 Cover Photo: Wade Doak's RAKA 'INTERLOCK' in Rikoriko Cave, New Zealand, with inside story: 'A Cat Among The Dolphins'.

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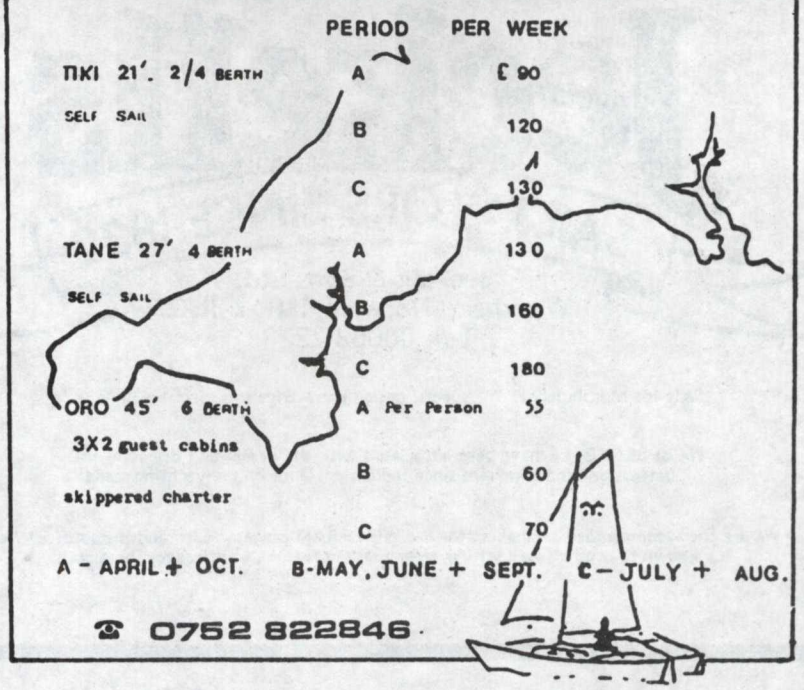

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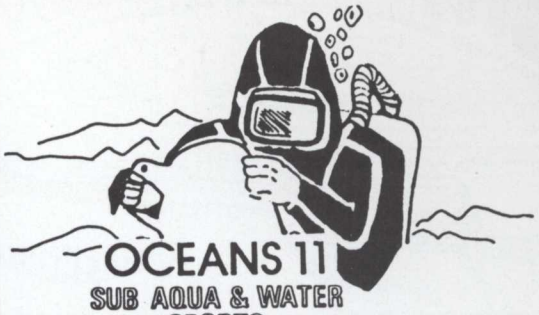

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DEVORAN SUMMER MEETING, 1985

report by Steve Turner

The weather for the 1985 Devoran Meeting was typical of Britain's summer this year, with gale force winds and driving rain, so it was not really surprising that no boats were able to make it to the Meeting.

However, a large turnout of builders and owners who came by road were made very welcome by J.W.D., who laid on a splendid barbecue on the Saturday evening (inside their building shed), followed by a showing of their TEHINI film.

On Sunday morning we saw the video of TEHINI's dolphin link trip to Brittany with Horace Dobbs (this will be shown in the UK on Channel 4 soon). The afternoon was spent in Devoran village hall with more films and chat.

More than 50 people visited the Meeting, including members from France, Holland, Belgium and Spain, and all those I spoke to agreed that it was a great success despite the weather.

Winter Meeting -AGM-

As mentioned in the leading article — Jim's Column — the winter meeting and AGM will be held this year at the West Brompton Lounge at Earls Court, very convenient to combine the visit to the Boat Show with the attendance of the AGM meeting.

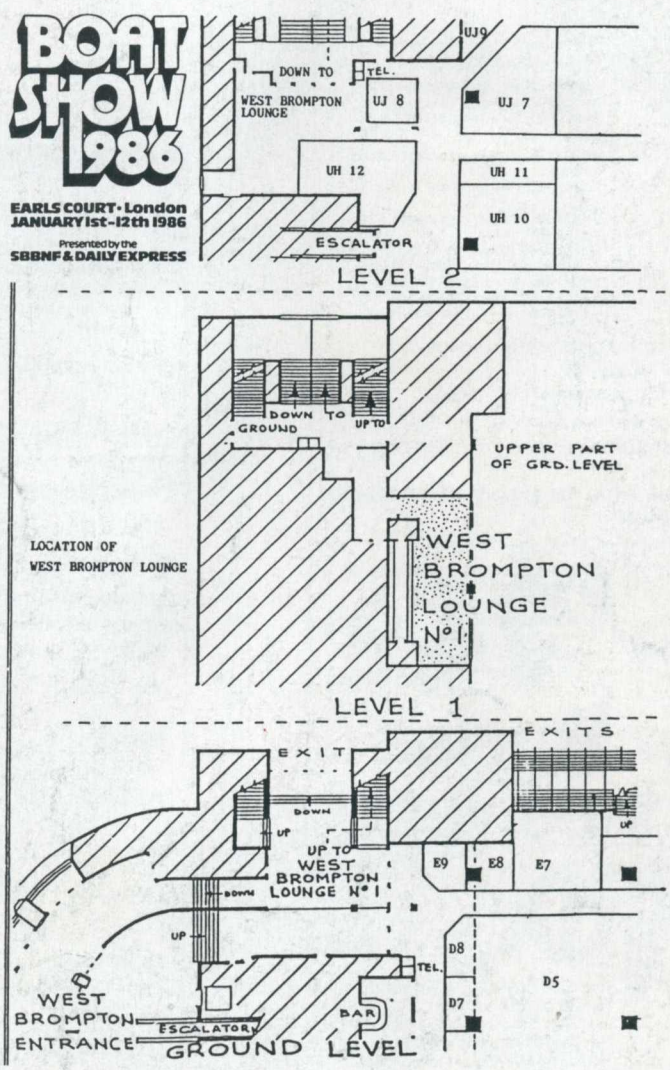
The date is the last Sunday of the Boat Show, 12th January, 1986, and the time: from 13.30–19.00 (1.30 – 7 p.m.).

After receiving notes like 'Beware' on the storage of sails and 'Money Saving Hints on Care of Synthetic Sails' — we have asked Jeckells whether they would like to give a short talk about these subjects as well as the different qualities and types of sails and sailcloth available etc. to our members at this meeting. They were pleased to accept this invitation.

The meeting will start with an exchange of news, photos and general discussions, followed by a talk from Jeckells, at 3 p.m., the official business part of the AGM from 4–5 p.m. ending with another two hours of any talks from members with slides, films etc. *So, please bring anything of interest to other builders/sailors.*

We will provide a slide projector and a super-eight film projector and look forward to seeing and talking to many of our builders, especially as we will not have the opportunity of seeing you on our stand at the Show itself.

Unfortunately, Ruth will be missing the meeting, as by this time she will be already in France at the Paris Boat Show. However, those, who are going to Paris, she hopes to see on the stand of 'Loisirs Nautiques' (10th–20th January, 1986).



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